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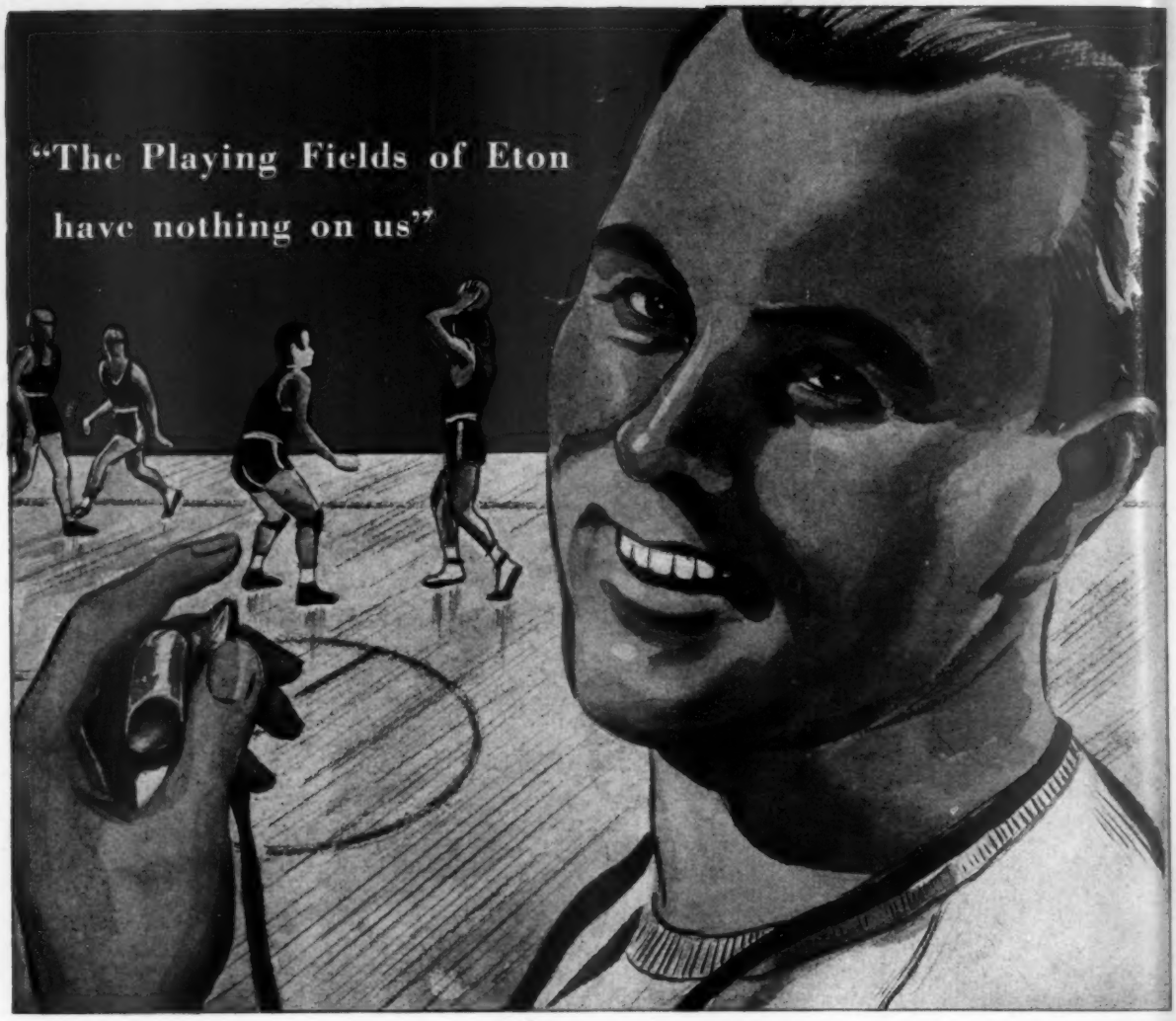

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SPORTS ARE CONTRIBUTING T

A RESOLUTION:

WHEREAS, we, the members of the Athletic Institute, Inc., are convinced that competitive, spectator and participant sports are contributing to the prosecution of victorious war, and

WHEREAS, we believe that intercollegiate and intramural sports in colleges and interscholastic and intramural sports in high schools give young men plus values in mental and physical fitness, and

WHEREAS, we believe that school and college sports always have contributed to the life of the student, the community and the nation and that they are needed now more than ever before, and

WHEREAS, we believe that it is patriotic for men and women engaged in war work and for business executives to engage in participant sports that will better condition them physically and provide them with a wholesome "change-of-pace," and

WHEREAS, we believe that spectator sports, such as college football and basketball, major league baseball, hockey, high school athletic contests, etc., are essential since they administer to the national morale, and

WHEREAS, there is indisputable authority that the American system of sports is superior to the former German turnverein system, which Germany, itself, abandoned to copy the American system,

THEREFORE, be it resolved, that we, members of the Athletic Institute, Inc., marshal our resources to present to the people of the nation the real values of sports in war time; that we fortify the public with facts and figures to protect them against minorities who would abolish sports even in peace times, and that we make these facts and figures available to federal government, military, state and local officials to guide them in consideration of the place of sports in war time.

TUR AMERICAN VICTORY DRIVE

OUR SERVICES:

The Athletic Institute, Inc., is providing the following services to acquaint the public with the value of sports in war time:

1. It is supporting the Industrial Recreation Association, whose function is to act as a clearing house for industrial management, war workers, personnel directors and recreation leaders in matters of wholesome leisure-time pursuits for "warrior-workers" on the home front.

2. It has twenty-six films of the motion picture, "Make the Most of Playtime," produced by the Athletic Institute, constantly in use.

3. It conducts a research bureau to compile authentic information concerning sports for guidance of school administrators, athletic directors, government officials, the press and other interested groups.

4. It has availed itself of public relations facilities to prepare news releases and editorials on facts established by the research bureau in the justification of war-time sports.

5. It stands ready to counsel with individuals and groups who are conscientiously striving to protect the American system of sports in war time against influences which would arbitrarily abolish sports that are contributing to an American victory.

THE ATHLETIC INSTITUTE, INC.
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The new Keds Bulletin stresses the need for every boy to keep fit! It explains and illustrates *tumbling*, as taught to paratroopers... *hand-to-hand fighting*, simple jiu-jitsu and wrestling techniques, practiced by scouts and rangers... *rope climbing*, as perfected by the Navy in pre-flight schools. It teaches the fundamentals of broad jumping, sprint and distance running, military track and strength building.

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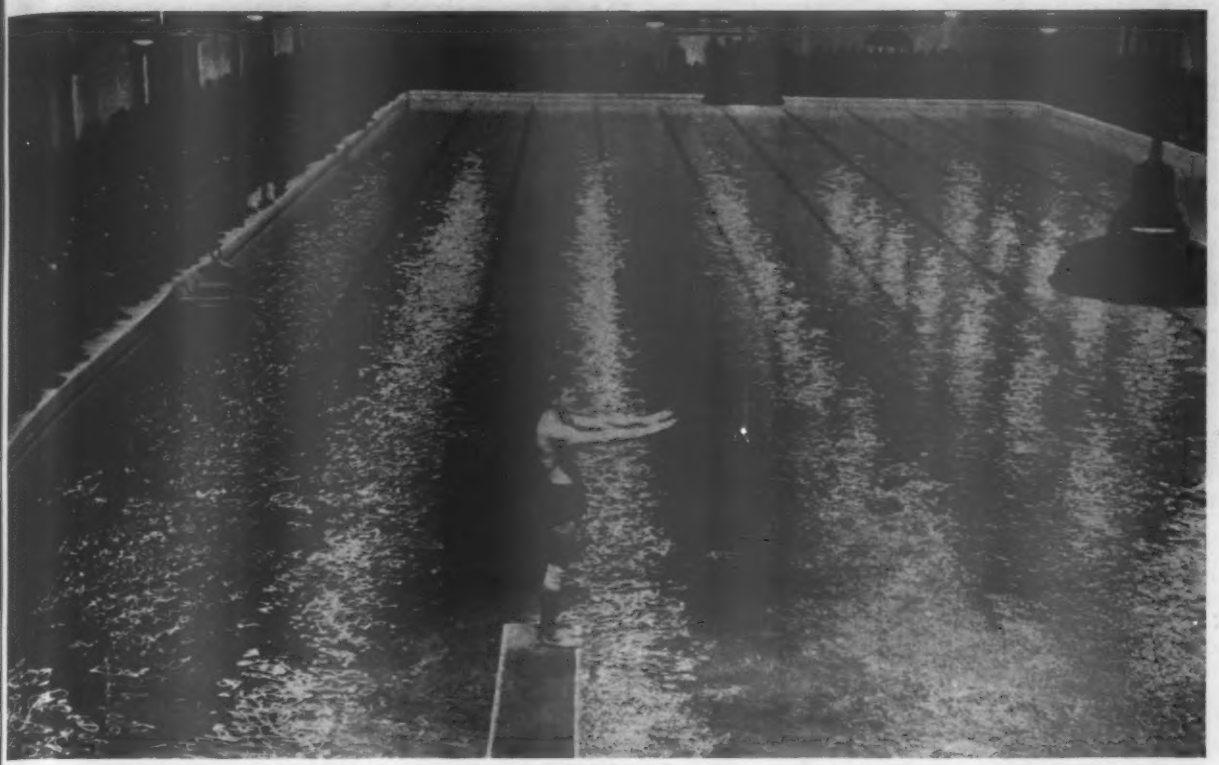

The new swimming pool at Great Lakes Naval Training Station 75 by 165 feet was dedicated in February. In the pool, which has a capacity of 600,000 gallons of water, seven hundred recruits may receive instruction at one time.

Swimming a "Must" These Days

By Walter W. Colbath, Lieutenant U. S. N. R.
Officer in Charge of Swimming, Great Lakes Naval Training Station

SWIMMING, qualification and instruction for all recruits is a "must" on the recruit training schedule of the Great Lakes Naval Training Station.

Our method of instruction is not unlike that at many of the other stations except that we deal with greater numbers. A check-up shows that we give approximately 45,000 lessons per week. A corps of forty-five instructors works from 0800 until 2030 six days a week. Sunday is reserved for recreation swimming.

The Initial Swim

Some time during the first week of "boot training," the men of each company are ordered to one of the eight pools that are in commission, for their initial swim qualification. Before the men are allowed in the pool, the following orders are given out. The non-swimmers are segregated from the swimmers to facilitate handling. 1. Wash the hair and body, then wash off the soap. 2. *Walk* through the passage and make sure you straddle the brass rail spray. 3. Line up on the port bulkhead single file. 4. Do not enter the water until given a signal by the instructor. 5. Either jump or dive in, swim any stroke you wish, and take as long as you like to swim the required fifty yards. 6. Do not interfere with the man in front of you. 7. Swim around the edge of the pool, until you get to the clerk, then get out and give him your name. 8. If you qualify, go immediately to the locker room and get dressed. 9. Absolutely no running.

Deck Practice

The following is a brief resume of how we endeavor to teach the beginner to swim. It must be borne in mind that each man represents a different problem and the instructor must use his judgment in varying the procedure, to meet the wide range in personalities that confront him. At present, we are in a twelve-week training period and that allows us to give the beginners at least twenty-nine lessons. The first lesson starts at the initial appearance of the men in the pool. It consists of teaching, on the deck, the fundamentals of relaxation and of the kick. (Illustration 1.) In the dry-land kick-practice the recruit lies on his stomach, stretches his legs out behind him, with his feet toed in slightly, and kicks up and down with a stroke of about fifteen inches. At the same time, the men are instructed to breathe through their mouths only. After this maneuver has been mastered, the men are placed in shallow water, holding on to the side of the pool and told to bob up and down, exhaling through their mouths under water, and inhaling through their mouths when they jump up. This bobbing motion is regulated to the cadence of normal breathing. (Illustration 2).

The Instilling of Confidence

The instructor tries to instill confidence in all beginners by demonstrating that the human body actually will float, even though the men do nothing but lie prone in the water. The men are then taught the "jelly fish" or what is commonly called the dead-man's float. This maneuver, consists of the men lying flat, face down, on the water, proving that they will stay on the surface as long as they hold their

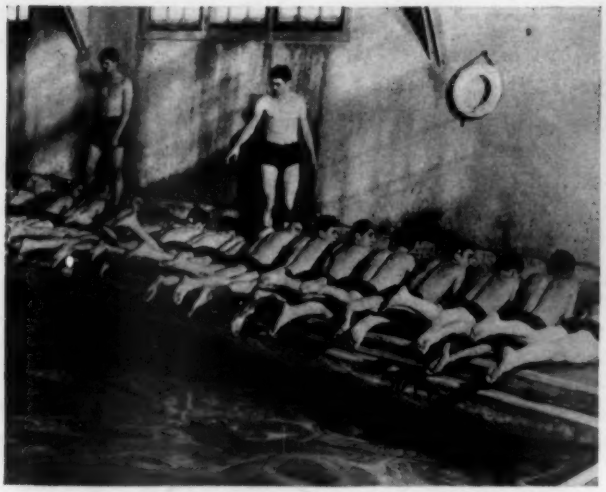

Illustration 1—Recruits learning the fundamentals of relaxation and the kick.

Illustration 2—Recruits, in shallow water, learn the fundamentals of breathing.

breath. The instructor makes sure that all men master this before proceeding.

The next maneuver in the first lesson consists of all men shoving off the side of the bulkhead, with head under water and going as far as they can, holding their breath. After a certain amount of practice of the aforementioned, the men are lined up alongside the pool in the water, to practice the kick by holding on the side and stretching out their legs as they did on the deck. (Illustration 3.) This part of the instruction proves to be the most tiring. The men are made to practice this for at least five minutes. We find that, if a man is slightly weary from this exercise, he is more easily handled on the next exercise which consists of combining the last two, namely: shoving off the side of the bulkhead, holding his breath as in the "dead man's float" and kicking his feet. This is the first time that the beginner realizes that there is power in his kick that will propel him forward.

The second lesson begins with a comprehensive review of the first. In other words, the men are given a good workout before they start their second lesson. The instructor then demonstrates the "human stroke" (dog paddle) first on the deck and later in the water. This stroke enables the man to keep his head above water and still make some forward progress. The class works the rest of the period on this stroke. Some of the men succeed at this point, but most of them require additional work. The main object is to keep them trying under guidance, until they gain full confidence. A good workout is achieved during this lesson and the men are visibly tired.

The third lesson starts with a review of the first two and continues on with individual instruction in the human stroke. Special attention is paid to stragglers and the more timid ones. During this lesson the men are in the water most of the time, except for short rest periods.

From the fourth lesson on, it is merely a matter of repetition and practice. The class is divided into two groups, the stragglers and the advanced. During the ensuing lessons each man is given the opportunity to qualify any time he desires.

Everybody Swims

Approximately 30 per cent of the incoming men cannot swim at all. About 75 per cent of the colored recruits are not able to swim. The result of this method of instruction shows that better than 99 per cent of the men who leave the station after their "boot-training" period pass the swim test of fifty yards.

In addition to teaching the recruits to swim, abandon-ship drills are given to all recruits and men in the service school, in which a 16-foot tower is utilized. (Illustration 4.)

Open Sea Swimming

A lecture on *Open-Sea Swimming* is given to each company. This consists of a talk on the subject of the dangerous sea animals, such as the shark, barracuda, and physalia (the Portugese-man-of-war) and how to cope with them.

One of our instructors, Roger C. Larson, Sp. 1/c, after a concentrated study of the subject, has this to say.

"Because the action of the shark and barracuda are alike, this menace can be taken up first. Swim quietly and slowly to avoid being spotted by these animals. Do not splash or speed-swim, but swim for endurance, keeping low in the water and keeping the kick and arm stroke below the water surface. For this a side stroke or breast stroke is the best method of swimming because the swimmer can relax and conserve strength.

"Upon being spotted by a shark or barracuda, a swimmer's chances of warding off attack depend upon his ability to make a lot of splash and commotion. For this reason swimmers should stay together in a body. Sharks and barracuda snip at arms and legs, so a wild thrashing motion can best elude their attack. In this respect, there is strength in numbers.

"The idea of attacking the sea animal with a knife is not advisable because lack of experience and swimming skill can bring certain death to such a foolhardy person.

"The physalia, commonly known to sailors as the Portugese man-of-war, is a third sea animal with which a sailor may have to deal. This animal floats on top of the water and has tentacles reaching out about eight feet, filled with formic acid. When these tentacles come in contact with a swimmer, the acid is injected into the system, and in a short time it affects the lymph glands and causes rheumatic pains. This sensation causes a man to lose his head and become panic stricken—inevitably fatal. It is not the acid itself that brings about death, rather, the pains and uncontrollable panic.

"Upon being struck by the physalia, a swimmer must remain calm and swim as slowly as possible until the effect of the formic acid wears off, or first aid can be given. First aid consists of a bath in spirits of ammonia slightly diluted."

Included in this talk on open-sea swimming, is the subject of oil and fire. Swimming in oil that is not afire is comparatively simple. Oil like many of its refined products spreads out to a thin layer of only one molecular thickness. Because oil has a specific gravity of less than one, it floats on the surface. Consequently, the story of a victim being weighed down and drowned by oil is false. The spread of oil is slow in the case of thick crude oil, and faster for the thinner products. The difficulty a swimmer encounters in oil is choking. Often the oil can get into his mouth

Illustration 3—Holding on the side of the pool and stretching out their legs, recruits practice the kick.

Illustration 5—Recruits are given instruction in manipulating, and clinging to, a rubber raft.

and nose and constrict the bronchials. Oil is tiring to swim in, because of its lack of weight and resistance. Water which is fairly heavy resists enough to allow propulsion through it by strokes in swimming, but oil tends to merely slide, and to leave the swimmer in the same spot. Since the wind spreads out the oil fast, it is most important to swim into the wind, against it. Here again, group action will help prevent panic, will make sure that those who need help get it, and will keep up courage. The breast stroke is the best because the swimmer can keep his head, mouth, nose and eyes up out of the oil and keep track of his shipmates, and is in a position to save himself.

Swimming in Fire

Oil that has been set afire brings a more difficult problem, because of the fact that swimming in it and splashing and pushing fire away, while not impossible, is much harder than in the case of the light, vaporous liquids, but the stroke to be used is the same. This problem of burning oil does not occur often, but is possible, when a ship is hit with incendiary shells, or when the oil is set afire by high temperatures. It does not ignite, however, as readily as the refined products.

The most important instructions which bear repeating for swimming in water covered with burning oil, gasoline, benzene, or other liquids are the following:

1. Keep on all light clothes.
2. Dive into the water from the windward side of the ship.
3. Use the breast stroke with a short-arm pull.
4. Swim as far under water as possible, before coming to the surface.
5. Before coming to the surface, start thrashing the arms in a circular motion, to break the surface and clear space for fresh air free of vapor.
6. After gaining breath, start a second lap under water or start swimming with head up, using the breast stroke, on the surface.

Illustration 4—Recruits are given abandon-ship drills.

7. Look around for shipmates with whom to stay, and find wreckage to use as a support or float; any piece of lumber or crating will buoy a person and conserve strength that may mean the difference between being saved and lost.
8. Keep cool and stick together.
9. Swim easily, with the idea in mind of swimming six or eight hours without tiring.

Making Water Wings

The recruits are also taught how to use their respective articles of clothing as life savers. Making water wings is very important. Duck trousers and shirts can be used to float on. This is done in the following manner: In a circular motion, swing the trousers through the air away from the body and hold the top of the trousers open. They will then fill up with air and can be used as water wings, if twisted into a "V" to draw the top together. When the air escapes, they can be refilled. In this way a person can keep afloat for hours with little effort.

When thrown into the water, a man has little choice as to the method of entering, but when a choice is possible, he should dive from the windward side into the wind and swim under water against the wind as far as possible. Upon coming to the surface, he must throw his arms high in a whirling motion to push away the fire above and get air to duck again, and go on under water out of the danger spot.

Upon getting out of the middle of a flaming area, he can go on with a short breast stroke, swimming slowly, first bringing up fresh water in front to push the flame ahead and away with a forward and upward motion, and then advancing through the water on a short draw back and kick. This modified breast stroke enables a man to push flames away from his face and the fumes away from his nose and mouth.

Water Safety Training for Draft-Age Youths Planned by Red Cross

***NATIONWIDE** training of millions of prospective members of Uncle Sam's armed forces, to enable them to cope with the deep-water perils of global warfare, will be undertaken immediately by the American Red Cross, according to Chairman Norman H. Davis.*

Because of the magnitude and importance of this undertaking, Mr. Davis declared, it is hoped that every community will co-operate in this effort and that every swimming pool and bathing beach in the country will be used to some extent for this purpose. The program has the unqualified approval of our military leaders, who recognize that pre-induction training of this type will be of inestimable value in fitting men for military service.

A successful attempt to score is shown in a game played in zero weather with a two-inch powder snow.

Upper Picture
A player after being tagged passes the ball off. An opponent is trying for an interception.

Lower Picture
A free ball often results in a tie up and a jump ball.

Bell Ball

By Charles Engle
Basketball Coach, Brown University

ALTHOUGH the originator of bell ball, Mr. Engle, has copyrighted the rules, he is most generous in his willingness to permit their use to coaches in introducing the game in their physical fitness programs.—Editor's note.

AMERICA at war or at peace is in need of a game that will build strength, stamina, speed, and endurance.

The values existing in bell ball should recommend it highly for a conspicuous place in the physical fitness programs throughout the country.

The game permits a large number of participants; its rules are quickly understood; very little equipment is necessary, and no previous playing experience is required. It is designed to develop quick perception, team work, speed, co-ordination, and stamina. Participants' interest and enthusiasm run high, since it combines the accuracy and speed of basketball with the interest and aggressiveness of football, making it a contest filled with action at all times.

The Game

Bell ball is played by two teams of thirteen players each. The purpose of each team is to dislodge their own goal ball with the ball in play and to prevent the opposing team from scoring. It is possible to play the game with more or less than thirteen players, depending upon the size of the playing area.

The goal does not count, if the ball in play should hit the pole below the goal ball and cause it to be dislodged.

Rule I
Equipment

Section 1. The playing field is a rectangle surface free from obstructions, 240 feet long and 160 feet wide.

Note 1. The game may be played between the 10-yard lines of a football field. The field is lined off as shown in Diagram 2, page 22.

Note 2. The playing field, as described in Section 1, is ideal. However, it is possible to play the game on a smaller field. The game may also be adapted to an indoor court with the goals suspended from overhead.

Section 2. The ball used for play shall be an official soccer ball in weight and circumference.

Section 3. Goals—(a) The goals are equal distance from the side line, 120 feet apart and 60 feet from the end lines. (b) Goal construction—A rigid pole extending 10 feet above the ground. A horizontal ring four inches in diameter and one inch thick is placed on top of the pole. (c) Resting in the ring on top of the pole is an inflated goal ball not more than 31 inches in circumference and not less than 30 inches (an old basketball). When the goal ball is dislodged from the ring by hitting it with the ball in play, a goal is made. A great amount of additional interest in the game is added by having the goal so constructed that a bell rings when the ball is dislodged.

The easiest construction is as follows: A pole 4 inches by 4 inches or a 4-inch diameter circular pole. A hole in the center of the pole comes out to the surface, 1 foot down the pole. The goal ball has a rope attached. Thread the rope through the pole and tie to a bell, so that the dislodging of the ball will release the bell, thus signaling a score. The goal ball is replaced by a pull on the rope (Diagram 1).

The sleeve in the ground is 30 inches. The pole is set into the sleeve. The pole

Carrying the ball behind interference. Upright blocks or checks are permitted.

A trapped player passes the ball off to a team mate.

may be removed and a cover placed over the hole.

Rule II
Method of Penalizing Fouls

Section 1. Fouls shall be penalized by giving the player at fault a prescribed number of laps to make around the playing area, and by giving possession of the ball to the opposing team.

Section 2. A player may be disqualified by an official for fighting or unsportsmanlike conduct.

Section 3. When the ball is awarded to the opposing team at an indicated point, all players must remain at least six feet away from the player putting the ball in play. Said player is permitted three seconds in which to put the ball in play and must not take more than one step in doing so. A goal from here would be permissible.

Section 4. In executing the penalty, the penalized player shall start at mid-field on his team's side of the field and at no time enter on to the field of play, until he has discharged the assigned penalty.

Section 5. By mutual agreement of both coaches, a penalty box may be used rather than a number of laps for penalized players. If it is not agreeable to both coaches, the first penalty (laps) will be enforced.

Section 6. An additional timing official is necessary in the event the penalty box is used.

Rule III
Playing Regulations, Violations, Fouls and Penalties

Section 1. The visiting team shall have choice of goals in the first half; for the second half the teams shall change goals.

Section 2. Each half is started by a jump ball at mid-field between a member from team A and one from team B. Teams A and B remain in their half on the field (the half farthest from their goal) until the ball has been tapped. Players jumping, face their own goal.

Section 3. Players may run with the ball, pass it, or strike it with hands, open or closed.

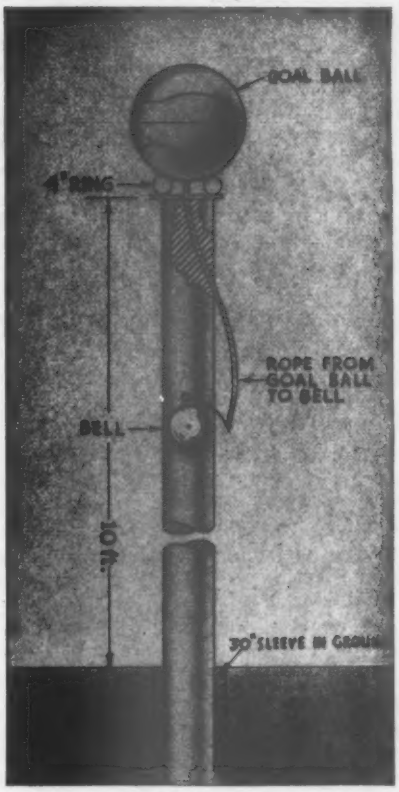

Diagram 1.

Penalty for kicking the ball intentionally: 1. One lap around the field or two minutes in the penalty box. 2. The ball goes to the opposing team at point of foul.

Section 4. A ball-carrier may carry the ball in any direction. However, if he is touched or tagged by an opponent, he cannot at this time throw for the goal or continue with the ball, but must pass the ball, before taking five steps or an elapsed time of three seconds.

Penalty: The ball goes to opposing team at point of violation.

Section 5. If it is advantageous for a player, he may attempt to tie up the ball-carrier rather than tag him. Not more than two men may attempt a tie-up. This must be done without leaving the feet and without a shoulder tackle, but by grasping the ball-carrier between his waist and shoulders.

1. A legal tie-up results in a jump ball.

2. Penalty for illegal tie-up: The ball goes to the opposing team at point of violation.

Section 6. The offensive players may block for their ball-carrier with an upright block or screen, but they must not leave their feet or use a shoulder-block or clip by running into the back of a player.

Penalty for illegal block: 1. One lap or two minutes in penalty box. 2. The ball goes to the opposing team at point of foul.

Section 7. Use of hands on opponents by members of the team in possession of the ball is not permitted. For example, the ball-carrier may not stiff-arm an opponent as in football.

Penalty: The ball goes to the opposing team at point of foul.

Section 8. (a) The defensive team may use hands on the body of an opponent to ward-off a blocker. The player warding-off a blocker uses his hands to push him away, but does not use them to strike an opponent. (b) There shall be no unnecessary roughness such as tackling, use of the hands about the head of an opponent, tripping an opponent, holding an opponent who is not in possession of the ball.

Penalty: 1. Loss of ball to opponents at the point of foul. 2. One to three laps or two to five minutes in penalty box, depending upon the seriousness of the penalty.

Section 9. After a goal is made the team scored upon may advance the ball to their opponent's one-quarter line without interference from the scoring team (the line 30 feet from the scoring team's goal).

Penalty for interference with intention of delaying the game: 1. The ball goes to

(Continued on page 22)

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JOHN L. GRIFFITH, Editor

A Sports-Loving Nation Can Fight

IT HAS frequently been suggested that the American soldier is the best soldier in the world. When we make that statement we, of course, are thinking in terms of soldiers, sailors, marines, coast-guard men and all the men in our armed forces. Perhaps, we are a bit prejudiced in favor of our own fighting men but, at least, it is justifiable pride that we have in them.

For the ultra-conservative we might put it this way. The American soldiers, sailors and marines are not excelled by fighting men in any other country in the world.

Certain things might be pointed out by way of supporting either one of these contentions. The most striking thing, it seems to us, is that the Jap troops who went against the American troops in the Solomons had several years fighting experience in China and elsewhere to their credit, while the great majority of our men saw action for the first time when they met the Japs.

The same situation developed in North Africa. Our men who met the German troops were new at this business of fighting and, consequently, during the first few minutes of the "first quarter" were pushed back. They, however, soon rallied and drove the enemy back into their own territory. The German troops who met our men in North Africa were picked troops, so it was reported, who had been conditioned in the kind of fighting that, in football, we would call practice games, yet our less experienced boys showed that they were at least a match for the German first team.

We might go on and call attention to the way our Navy fought at Midway and in the other engagements and, in fact, how our troops scattered around the world have certainly demonstrated in a short time that the American fighting man is not surpassed by any other nation's fighting men.

Why is this? Some may say because we had better officers. With this argument we will take no exception. We, personally, believe that our officers are the best in the world.

Some will say that it is because we have more to fight for than do the people of totalitarian countries who, in a sense, are slaves to their totalitarian masters. This also, we are glad to agree, is probably true. There have been innumerable incidents in this war, however, which show that the men from Russia, Germany, Japan and other countries, involved in the war were courageous to the nth degree.

The point that we want to make is this, that one reason why our boys, in a few short months, are able to shift from peace-time pursuits to military endeavors and to meet the best that the other nations of the world have to offer is partly, at least, because of the athletic training that our young men, almost from childhood, have received here in the United States of America.

We are not thinking solely of the boys who got into school and college competition, or of the men who played in the professional leagues. We believe that their training was superior, on the whole, to the training that the others may have had, but the great majority of our fighting men did not make the teams and, yet, they have done a fine job of fighting. Can it be that it is partly, at least, because these boys also had a certain amount of athletic training? It may be their athletics were of the loosely organized sort. Perhaps, it started with games with other children of kindergarten age in the courts of the big cities or in the pastures in the farm districts.

Recently different news commentators have raised this same conjecture. We are disposed to agree with their contentions.

If these things are true, then why do we waste more time in arguing whether or not our sports should be continued during the war. Someone the other day very aptly remarked that when our lads were fighting in Guadalcanal they did not depend upon the lessons that they had learned from books when they were in school, but they had to depend, at least, to a certain degree, on the things that they had learned in their combat games.

Draft Boards and Athletes

RECENTLY a member of a draft board wrote, to the sports editor of a metropolitan newspaper, a letter complaining because the aforesaid paper had been giving a great deal of attention to sports while the war was going on. The gentleman especially complained because he knew of a 130-pound boy who was fighting in Guadalcanal, and he also knew of a 220-pound athlete who was in college and, this winter, had played basketball on a college team.

His conclusion was that the 130-pound boy should be home working in a defense factory or attending college and the 220-pound athlete should be fighting the Japs in the Solomons.

This gentleman's complaint, perhaps, should be ignored, but, after all, a good many people are thinking as he apparently does that all the athletes should be in the service. He, being a member of a

draft board ought to know, however, that the draft boards determine the status of the draftees and when they should be called. We have no reason to know why the 130-pound boy who is fighting in Guadalcanal was sent by his draft board. It may be that he is a great soldier. If we may be pardoned for our prejudice, and also our pride in our American boys, we would bet a few blue chips that this 130-pound lad is standing up to the best that the Japs have to offer.

We do not know the case history of the 220-pound athlete. It may be that his number has not come up yet, or that his induction into the service was postponed until he had finished some special training in the college that he was attending, or it may be that he had been rejected because he was color-blind, or for some other physical reason.

The gentleman from the draft board, no doubt, did not know the answer to these questions either, but because this big, husky boy was spending his free time in playing basketball, he was condemned and this, we maintain, is unfair to the boy.

We have more faith in the honesty and integrity of the draft boards than apparently this man who was a member of a draft board has. Perhaps, we have, in our innocence, been too much inclined to believe that the American citizens who are serving on the draft boards throughout the country are doing a fine and patriotic job. If they are, of course they are not keeping athletes out of the service, because they are athletes.

It would be interesting if some of our coach readers would make a list of all of their boys who have won high school or college letters, let us say, in the school year 1941-42 and then report what those boys are doing now, that is, how many are in the service, how many are in essential work, and how many have been rejected for physical reasons.

We suspect that some studies of this sort will be made, but we would, certainly, be interested in seeing the results of any studies of this sort that our readers may care to send us.

A *Division in the Ranks*

OUR readers occasionally express their views on the editorial page. We are pleased to present, herewith, the following editorial written by Delbert Oberteuffer, Professor of Physical Education, Ohio State University.

Current developments in physical education in schools, colleges, and the military services certainly do not speak well as an answer of our profession to the needs of a population for fitness in time of war. The tragedies of split opinion and diverse practice are all too evident. Action based on scientific fact, common sense and popular appeal seems to be undermined by a reversal to archaic practice and a worship of body building.

Specifically two discouraging and damaging trends are in evidence. One, a rivalry between "athletics" and "physical training" which is tearing down twenty years of slow and patient growth in common understanding and program development. Years ago, some of the official bodies of athletics and physical education representatives found themselves at odds, each snubbing or attacking the other as the provocation warranted. Slowly these differences were disappearing and we seemed to be uniting on an American program of sports and games for all from which American youth was the single beneficiary. Now, in wartime, we are splitting again. The Victory Corps program recommends a *compulsory* hour of calisthenics and "conditioning" and a *voluntary* period of athletics. The Navy spokesmen decry competitive sport from one office and develop it fully from another. The National Collegiate Athletic Association and various athletic conferences strive mightily to get us, and the government, to see the merit to sport, and the Office of Education plans a college physical education manual containing program suggestions which some of us consider unusable.

And, second, what of the landslide now plastering the country with calisthenics, "conditioning" drills, and marching? Are these the answer of a physical education profession to an emergency need? How can we fly so freely in the face of popular opinion, foist such dry and sterile stuff on a rising generation, take such pleasure in once more giving commands and "making 'em toe the mark?" How does it happen we suddenly renounce our recognition of the scientific fact of man's unity and cry out for a "physical fitness" unrelated to human needs, human nature, and human interests?

The damage done to school and college programs by the free and compulsory use of calisthenics and phony "conditioning" exercises will take years to repair. American youth will have none of it as a continuous diet, and scientists, the true scientists of human life, will give up hope for finding in us interpreters of the facts of human development through a rational program of activity.

By what effort could we be diverted from our course of disunion and fraud? What could bring us to view our responsibility as one in which (1) American sports will be preserved for the expert and extended to the many, (2) modern techniques in disease control and repair of handicaps will be brought to all who need them, (3) adequate nutritional and mental hygiene programs will be extended as crucial in any program of fitness, (4) an individualization in the prescription of exercise-activity will follow an adequate differential diagnosis, thus killing once and for all the spurious notion that exercise applied to the mass will do the trick, and (5) simulated military activities (swimming clothed, combat, wall-scaling, obstacle attack) will be developed as *skill* conditioners?

Here are the ingredients of a true fitness program. Such a development in schools, colleges, and communities would require us to give a practical demonstration in co-operation and co-ordination. No one group could say, "We have the answer to physical fitness," as some physical trainers are now saying. Physicians, physical educationists, public health officials, and athletic administrators, united on such a program could do a splendid job for the nation—if only they would.

Baseball and Its Contribution to Physical Fitness

Baseball for the War Effort

By John H. Kobs

Baseball Coach, Michigan State College

DURING the present conflict, a great deal of emphasis has been placed upon athletic programs for the ultimate in physical conditioning of members of our armed forces. As is often the case, a difference of opinion has existed between administrators of these programs as to the exact type and amount of this physical and athletic training. In certain quarters, and from certain individuals, this tendency has been toward set routines with limited sports activities and the elimination of certain sports entirely. The inference is that they wish to get the men "hard as nails" and as conditioners for this, only a few sports qualify. Naturally, all sports do not qualify under these standards. Unfortunately, there remain a few sports that would qualify when properly examined.

It is unfortunate that baseball has in some cases been ruled out as a non-essential, because it was argued that it did not measure up to the standards for the toughening of the individual for combat duty. Nothing can be farther from the truth, when the facts are examined closely. Let us, therefore, examine the great game itself in order to evaluate just how essential it can be to such programs in the physical and mental, as well as in the morale, development of our troops.

First, just what are the qualities for developing physical fitness? Baseball as a sport offers a variety of physical activities such as fast running, quick starting and stopping, throwing a ball, catching it, fielding ground balls, catching fly balls, sliding, batting, stretching for throws and pepper games. In the playing and practicing of the game all of these activities may be so arranged and so administered as to supply maximum physical exertion. In fact, they are just as exhausting as any other physical training routine, when arranged on a basis of competition and achievement, coupled with the fun always involved. Physical fitness may be achieved as readily, as when the men are made to run long distances, jump obstacles, etc. Baseball being a fun-sport has the added advantage of being a pleasure, when being practiced. This, therefore, has a tendency to give added zest and interest to the player. It is easy to see that, where such a condition exists, the problems of training and conditioning become more simple. This is a war of complicated machines. Men who man these machines must have quick reactions and be well co-ordinated. Baseball, in a large measure, supplies just such training. For example, just visualize the co-ordination and split-second timing necessary for a batter to swing at, and hit, the pitched ball, when in most cases, he must make his decision within a half second. Catching and throwing a baseball with the same motion for double plays requires an equal amount of co-ordination. All these phases of the game woud tend to teach the very things our combat soldiers need. Furthermore, the vast majority of our American boys love the game and would, therefore, be inclined to put more into it as participants than some other heavy physical activities which they often regard as drudgery.

From the mental, psychological and morale-building standpoints, I think the following are a few attributes developed in the game of baseball, that squarely fit into the war effort:

1. The nerve-control, required to catch, stop or bat a blazing fast ball, may be called a test for *courage*.

2. Ability to react to the rapid conditions of play, coupled with keen observation required to play correctly, is a developer of *alertness*.

3. Baseball is a sport where the individual player must stand alone under tense and trying situations without help from a team mate. Surely, this training gives him *poise*.

4. *Leadership* is developed by a game, where initiative is required for making split-second decisions.

5. The value of *team play* certainly has to be learned in as highly an organized sport as baseball.

Finally, one of the biggest arguments in favor of baseball as a war sport comes from the fact that it has very definite carry-over recreational values. This is especially true when the men reach combat zones. Requests from the men themselves for baseballs, bats, gloves are constantly being received to provide just such recreation. On the home front, it is equally vital to morale, that the sport be kept alive and going. In a recent survey of requests from soldiers and sailors in foreign fields, it was found that news of our baseball scores was near the top of the list. All these factors finally boil down to the question, "How are we going to carry on in the colleges and universities?" At the present time, an answer to this question is difficult to find. I do know, however, that it will be possible to continue the sport in our colleges, if the coaches make a real effort to do so. There are a goodly number of baseball players who are still in school. Recent decisions to allow freshmen to compete have helped the situation. Even if it may not be possible to have schedules on the old basis, I am sure a complete schedule can be had, by playing teams in the immediate vicinity. Service teams are always ready and willing to play college teams. Here at Michigan State, our plans call for a baseball team this coming season. Indoor practice has been held since January. Although this will be the first time in eighteen years that the baseball team will not take a Southern trip, it is our aim to have a nearly complete schedule of home games. Furthermore, as baseball is the oldest intramural sport at our college, it is expected to have a stepped-up program. Let's continue to boost and foster America's Number-One sport.

Our Baseball Program Will Be Continued

By Joe E. Gargan

Director of Athletics, Kingswood School

UNTIL victory has been achieved, the boys in our secondary schools must be taught to prepare themselves for combat. For the duration, that must be the sole aim and purpose of their educations. They must be prepared for fighting in which the individual who is strong, agile and poised has the best chance for survival.

Captain Eddie Rickenbacker has repeatedly stressed the idea that, in the air, on the water, and on the land, the front-line fighter engages the enemy in combat in which the individual must rely on his own resources. Even where massed troops are concerned, the individual must work out his own salvation in moments of stress. We all know that the training of our boys to be cool and self-reliant in the face of danger, to think and plan when life is at stake, and to control emotion and muscle to meet a crisis is the fundamental requirement of the moment.

If there is a better medium for providing this training for large numbers of boys than baseball, we should know about it and go to work upon it at once. If, as coaches and persons who know the game believe, we have in baseball the ideal means of providing this essential training for our boys on a national scale, we are stupid and incompetent, if we do not take advantage of it to the fullest extent. Every coach should do his utmost to give every boy whom he can reach the advantage of com-

(Continued on page 32)

"University" (No. US) A well constructed baseball shoe that deserves its wide popularity. Goodyear welt construction. Yellow-back kangaroo uppers. Special steel spikes, Parkerized to help prevent rusting. D and E widths, sizes 6 to 13.

Professional Model Baseman's Mitt (No. 153) One-piece palm and thumb. Top-quality greased willow cowhide. Full cowhide lining. Custom-made padding. Laced wrist strap — a professional mitt from every angle. Also available in full right.

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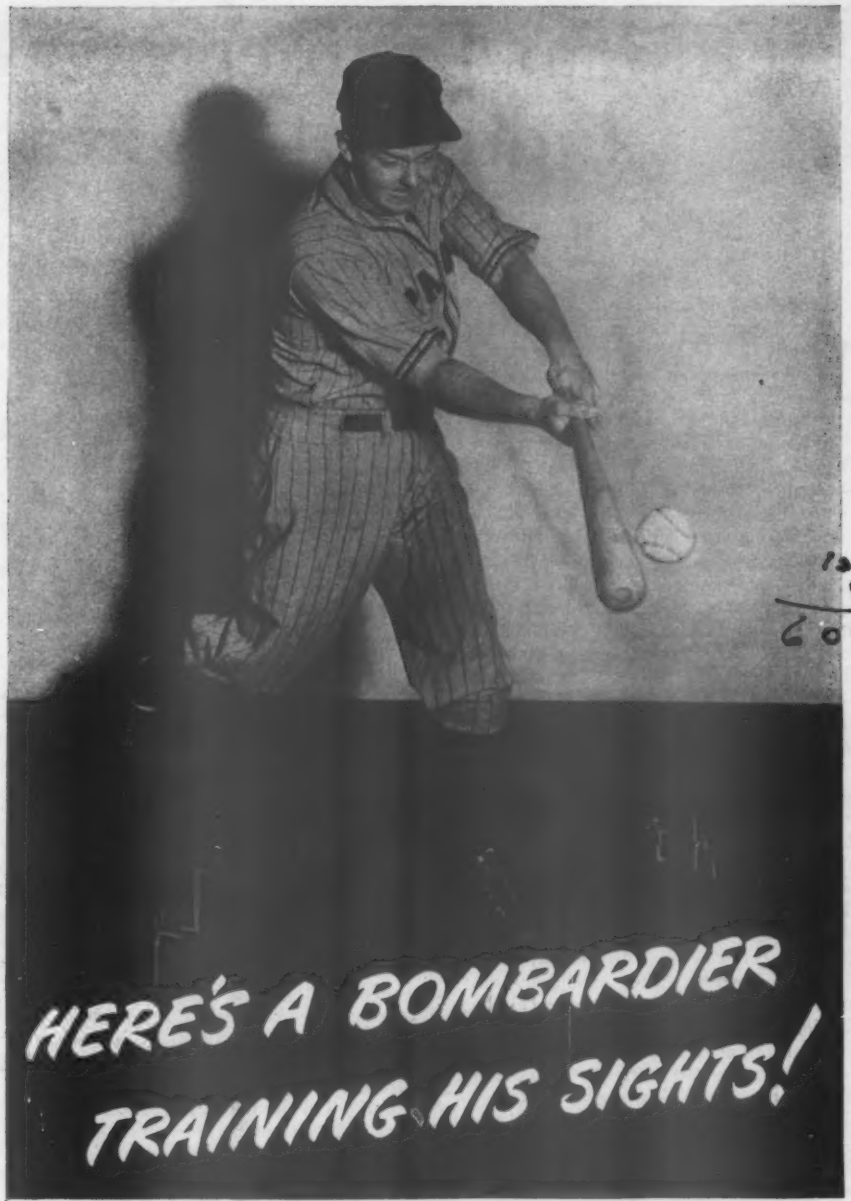

● Sharpening his timing to drop "eggs" on a target at 400 miles an hour . . . Learning the kind of coordination it takes to make the big team of America's armed forces — these are the priceless lessons that baseball helps to teach. This season the game takes on added importance. Baseball will be the stepping stone that toughens up thousands of players for important fighting jobs. And this season as always, Spalding, despite its intensive production of war materials, will supply teams throughout the nation. Use Spalding equipment for big league performance. Order today.

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SPALDING SETS THE PACE IN SPORTS

Human Engineering Through Industrial Recreation

By Floyd R. Eastwood

Purdue University, Lafayette, Indiana
President, Industrial Recreation Association

Scope and Meaning of Industrial Recreation

INDUSTRIAL Recreation presents a problem of definition, explanation, and delimitation. The phrase is often heard and, as often, carries different connotations. Certain implications and theories should clarify the meaning that is ascribed to the phrase in this presentation.

Recreation deals with a kind of activity that is engaged in without compulsion and usually brings immediate and direct satisfaction to the participant. It is not the antithesis of work; rather it compliments work. For some, work is recreation, as in the case of Thomas Edison; for others it is drudgery. When work is satisfying and engaged in without compulsion, it may be considered recreation.

Industrial recreation is a phrase that locates recreation in a specific area of living. In short, it deals with satisfying activities carried on for, or promoted by, employees in the numerous lines of business endeavor. These recreational activities range from such passive types as stamp collecting or chess to the more vigorous types such as basketball, baseball, and the like. They should include activities discussed herein under the classification of physical, social, cultural, and outing types of recreational activities.

Furthermore, the current use of the phrase indicates a felt need for recreational activities in industry. This need has been steadily increasing during the last decade. In the early days of the industrial revolution, recreation for the worker was not considered important because of occupational specialization. Long hours of hard work left little or no time for leisure. Much progress has been made in industry since the beginnings of the industrial revolution. As a result of scientific management, the invention of machines, and consequent shorter hours of work, the laboring man and management have been confronted with the problem of the constructive use of leisure time.

G. S. Watkins states that, "During the nineteenth century industrial development proceeded so rapidly in Europe and America that the necessity of protecting and conserving the human element in production was scarcely recognized. Economy in the application of capital, replacing of worn-out machinery and conservation of natural resources received careful consideration. Waste of human life, accumulation of fatigue and destruction of health in industry received no such attention."[1]

Implications of Recreation in Industrial Relations

Factor Contributing to Personal Relationships

Nature of Industry. In modern industry, management has used the money, property, and machinery provided by the stockholders' investments and, by directing the efforts of labor, has produced products which have been offered for sale to the public. This procedure has been carried out under the control of, and within the structure of, government, and has contributed to impersonal relationships. Management tries to minimize labor costs, while employees endeavor to acquire the highest wage possible.

Social Maladjustments. During the present emergency it would seem that employee recreation should become the concern of industry. There are numerous cities which have been called upon to provide recreational opportunities for military forces. As a result, the community has restricted the participation of industrial workers in the public recreation programs. Thus the industrial worker loses many opportunties for participating regularly in a recreation program.

Then too, there have been a large number of cities created overnight, to meet the needs of defense production. Inasmuch as such communities had no previous recreation program, industry should accept this social problem as its own.

Scientific Management. Scientific management in many instances is resulting in violent disagreements between management and labor, especially when such procedures have been attempted without a mutual understanding between the two groups. Management is using experts and specialists more and more in its endeavor to solve the many problems confronting industry today. Time and motion studies, flow charts, and job evaluation techniques are examples of the functions performed. These techniques minimize the personal contact between the administrative officers and the employee, and tend to judge the individual employee by statistical standards alone. Such practices are cited by A. C. Horrocks.[2]

"My primary function (as a foreman) is to get the work out. I do not belong to any group. I am in the middle, and I know it. I am sometimes confused. When I want to ask questions, top management is very often too busy to listen to my questions.

"I once was in full charge of everything concerned with my department. Then scientific advances in management took the hiring and firing and the handling of grievances away from me and put an expert on the job, called a personnel director, and he has done that job—that staff function—much better than I could have done it.

"I used to set the hourly rates and establish piecework prices. Now the setting of day rates and hourly rates of piecework, and of bonus, is done by the efficiency engineer, and it is done much better and more scientifically than I was ever able to do it.

"In times past I was not troubled about budgets. But now I have to work on an estimated budget, and must bank that against my actual expenditures. The budget is set for me by a comptroller or the accounting department.

"I used to change methods of manufacture in my department, at will. Now a specification department gives me a pink sheet and I must live up to that religiously. It is done better than I ever could have done it. Recently legislation has made me hesitant to talk to my employees about a great many things."

Governmental Influences. The Social Security Act, the Wage and Hour Law, the National Labor Relations Act, and numerous other federal, as well as state laws, have made definite contributions to employee welfare. In numerous instances, however, they have tended to diminish the personal contacts between management and employee.

Reserve funds established within the Social Security Act have provided the employee with an old-age insurance, unemployment compensation, etc. In addition,

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Abstracted from Diehl, L. J., Eastwood, F. R., *Industrial Recreation: Its Development and Present Status*, Lafayette, Indiana, Purdue University, 1940.
Abstracted from Duggins, G. H., Eastwood, F. R., *Planning Industrial Recreation*, Lafayette, Indiana, Purdue University, 1941.

[1] G. S. Watkins, *Labor Problems;* New York, Thomas Crowell Co., 1921; p. 324.

[2] A. C. Horrocks, "The Foreman's Own Point of View," *Selection and Development of Foreman and Workers*, New York, American Management Association, 1940, p. 20.

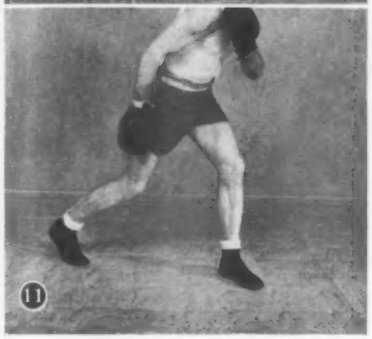

Illustration 9—Side Step Right (First Step). Note by the center line on the mat that the body weight has shifted, and that both toes are pointed in the direction in which the boxer is going. The right foot which is now the front foot comes off the floor first.

Illustration 10—Side Step Right (Second Step). Note the line on the mat now. The boxer's position has shifted to a 90-degree angle to the right, and he is now in a position to counter his opponent whose path of attack would be along the line on the mat.

Illustration 11—Side Step Left (First Step). The boxer's body and toes have turned to a 90-degree angle to the left. The left foot now becomes the front foot and, therefore, is the first off the mat. Note the direction the toes are pointing.

Illustration 12—Side Step Left (Second Step). The whole body position has changed to a 90-degree angle. In this maneuver the left foot becomes the pivot foot, and the right foot is whipped around 180 degrees. The boxer is now in a good position to counter his opponent who rushes by.

Illustration 13—Correct Footwork for Circling Right. The right foot now becomes the front foot as that is the direction in which the boxer intends to go. Note the center line. The head, body, and right foot of the boxer have been shifted several inches to the right. His next move will be to slide the left foot an equal distance to the right which will return him to a balanced stance. The boxer may decide to repeat this maneuver several successive times to gain an advantageous ring position.

Illustration 14—Incorrect Footwork for Circling Right. The boxer has first shifted his left foot to the right, thereby crossing his legs. Should his opponent advance at this point, the boxer's left leg would be tripped by his right leg, thus placing him off balance and vulnerable.

Illustration 15—Correct Footwork for Circling Left. The front left foot is moved slightly to the left first, as the head and body are so moved. The rear foot is then moved the same distance. The boxer may repeat this maneuver to gain a more advantageous lateral position.

Illustration 16—Incorrect Footwork for Circling Left. Note that the rear foot is first moved behind, crossing the front foot. Should the opponent advance at this point the boxer's front foot would trip over his rear foot in his attempt to retreat. This would put the boxer off balance and would give his opponent a definite advantage.

many companies provide group health and accident insurance; therefore, it is no longer essential that management take the personal interest in employee welfare that it once did. In fact, employees generally do not approve of paternalistic tendencies on the part of management. As a result, non-paternalistic tendencies characterize

(Continued on page 27)

A Method of Developing Intramural Basketball Officials

By Joseph Brownlee

Director of Athletics, Rumson, New Jersey, High School

IN NO game is an official of more importance than in a game of basketball. An official may mean the difference between victory and defeat in a closely contested game and, yet, with the fact of this importance in mind, many schools do little or nothing to develop qualified basketball officials. It is, I believe, one of the big jobs of the physical education departments to develop capable officials, as there certainly is a scarcity of good officials for the high school and college games. If there is a scarcity for these games, then there is a definite shortage for our intramural leagues. There is a tendency to "pick up" anyone that may be around to officiate these intramural games; this should not occur, but a definite plan of developing qualified officials should be undertaken. Following is a plan which I have used with remarkable success in the development of basketball officials, many of whom are now members of the National Association of Approved Basketball Officials.

The first step in the development of good basketball officials is to give them a thorough background of the game of basketball and to trace its history from the time that it was first played in the winter of 1891 at Springfield College, under the inventor, Dr. James Naismith, until the present day. The high light that must be stressed in tracing the history is the original draft of rules that were first posted in 1892 and then to trace changes in these rules down to the present time.

After having traced the history, the rule book must be systematically covered by reading and discussing each rule individually. This may be done in sports appreciation classes or in leaders' clubs. A thorough knowledge of the rules may be developed by this method, and in conjunction with this coverage of the rules, "would-be officials" may submit in writing, a knotty problem concerning the rules, an official's decision that had been made in a recent varsity contest, or any other problem pertaining to the rules. These problems should be taken up one by one, and through discussion and reference to the rule book, be correctly answered. The use of the rule book in this manner gives the pupils experience in looking up materials and causes them to familiarize themselves further with the rules.

Following the coverage of the rules, an actual demonstration between two players should be set up. There, players should demonstrate and the instructor and the class should discuss the legal steps from a jump stop, legal steps from a two-count jump stop, legal steps from a stride stop, fouls by, or upon, the dribbler, blocking, and the pick-off screen. This demonstration and discussion give the boys a chance to see a practical application of the rules to a game situation.

The next thing to do is to look up suggestions made to basketball officials in the rule book and to discuss officiating by a single official and with two officials, in using the Kirpatrick plan of dividing the court. The points that must be given major emphasis in this section are the following:

1. What spectators have a right to expect from an official.
2. What an official has a right to expect from spectators.
3. The acceptance to officiate a game and the preparation for a game.
4. What the official should do before the game.
5. What to do during the game; what are the working positions on the floor.
6. What to do in case of out-of-bounds play.
7. What to do in case of held ball.
8. How to call fouls and signal the scorers.
9. How to announce violations.
10. What to do at half-time.
11. What to do at the start of the second half.
12. What to do in case of extra-period play.
13. How to charge and signal time out.
14. What to do at the end of the game.

After having given all this information, holding discussions, and seeing the demonstrations, arrangements should be made to have the boys observe an official who is thoroughly qualified. They should observe his techniques and methods of conducting the game. As he is officiating, the instructor can be pointing out the various good and bad features of the officiating. At the completion of the game a general discussion should be held and pupils should make suggestions as to how the official might have done a better job. If the instructor is a qualified official, he should officiate a model game as an example to the pupils. Having done so, discussions should follow and the techniques used should be pointed out.

After this preliminary work is completed, it is time to let the boys actually officiate games in the intramural league. The preliminary work should be given to all classes, but only the best boys should be allowed to officiate. Select the boys and arrange an officiating schedule for them. They should keep in touch with this schedule and appear at the times designated. When the boys officiate a game, the instructor should observe them, and after the game, their work should be fully discussed by the instructor and the official. Suggestions should be made to improve the boys officiating, and the instructor should keep doing this until the boys are fully competent. Any problems that the boys may have should be brought to the instructor and he should help to straighten them out, so that better officiating will be the result. If a boy officiates outside of school, he should be asked to submit a report in writing, and it should contain such information as the time and date of the game, competing teams, other officials, the score of the game, the coaches, conduct of the teams, and a self-rating as to how he officiated.

Officials have co-operated with me in a study of this plan detailed above, and the following conclusions have been reached:

1. It is an excellent all-around method of developing officials.
2. The boys are better officials, because they have been given an insight into the background of the games and the rules.
3. Actual techniques of officiating show a very definite improvement.
4. Sports vocabulary is increased by learning new terms associated with officials and officiating.
5. It develops a sense of responsibility and desire to do a good job.
6. Players develop more respect for officials, because they know of their preparation.
7. It gives all members who take this course a more sympathetic feeling toward officials and their problems. This is of great value in a student body.
8. It is excellent preparation for those who wish to become regular approved basketball officials.

Headed for Victory

A natural athlete, Joe here has come a long way under you, Coach. He's smoothed out his stride . . . his breathing's controlled . . . he's a strong finisher. Ordinarily Joe could look forward to a brilliant future in college track.

But this is a war year

That changes the picture for Joe and his teammates. Next year, some perhaps will be tossing "flak" at a swarm of Zeros . . . or roaring across burning sands in a tank. Others may be moving forward on a new front.

Wherever they are, they'll be better men because of your capable guidance. You helped build them into splendid physical trim. And that ability to act fast and smart under pressure which you taught them in competitive sport will go far towards securing final victory and their early return home.

Soon other young fellows on their way up will be looking to you for training and friendly advice. They're going to need the same fine instruction you gave Joe and his buddies. We know you'll give them all you've got. And now as always, you can count on Bike to provide them and you with dependable protective equipment—the best we can make under wartime conditions.

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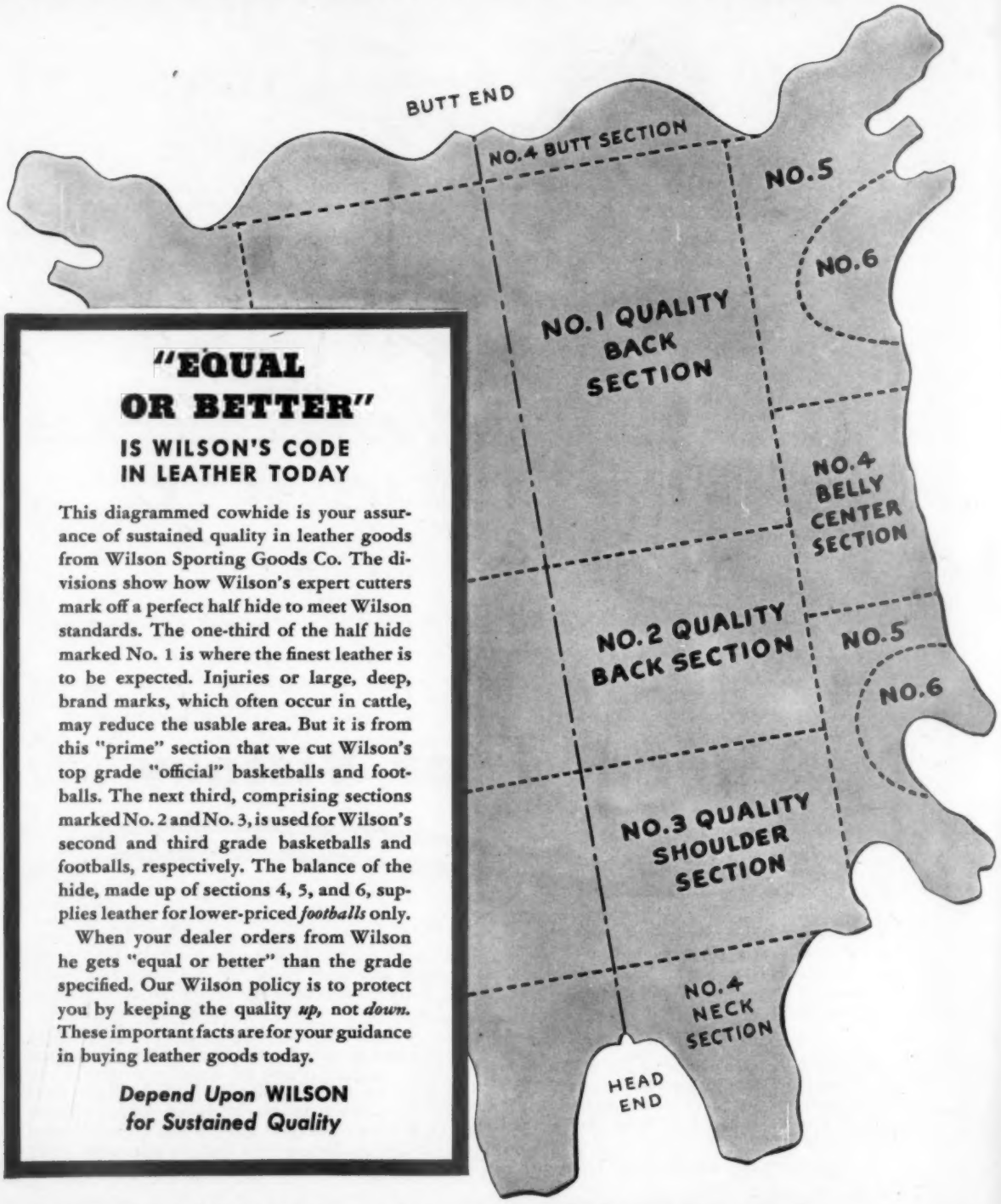

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The name "Wilson" on a basketball, football, or soccer ball is your guarantee of maximum *quality* for the price, *today as always.*

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Wilson

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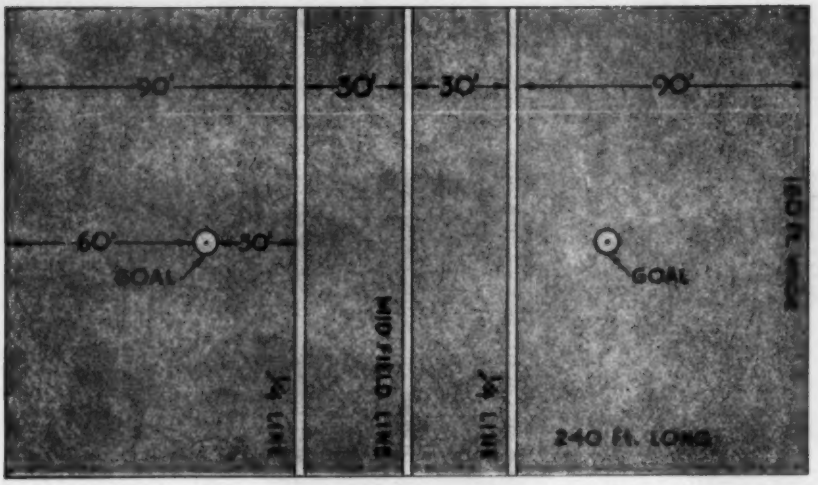


Diagram 2.
the opposing team at mid-field.

Rule IV
Out of Bounds

Section 1. (a) When the ball goes out of bounds, an official shall award it to a nearby opponent of the player who caused it to go out. (b) Ruling is the same for a ball carried out of bounds.

Note: It is not necessary to throw the ball in. If the ball is carried in bounds, the player must come in bounds at the point where the ball has been awarded to him.

Section 2. A player cannot throw for a goal, while taking the ball in from out of bounds. If a goal should occur on a throw in from out of bounds, the ball goes to the opposing team at mid-field.

Rule V
Definitions

Section 1. Dead Ball: The ball becomes dead and play ceases until the ball is put in play again by an official. (a) When an official sounds his whistle. (b) When a held ball is declared. (c) When a foul is called. (d) At the expiration of playing time. (e) When the ball goes out of bounds.

Section 2. A disqualified player is one eliminated from the game for unnecessary roughness.

Note: This includes fighting or unsportsmanlike conduct.

Section 3. Delaying the game is intentionally interfering with the progress of the game by a player.

Penalty: One lap or two minutes in penalty box. The ball goes to the opposing team at point of foul.

Section 4. A held ball is declared when a player ties an opponent up so that he cannot pass the ball. A held ball should be called after a player has been tied up for two seconds. A held ball results in a jump ball at the spot.

Rule VI
Players and Subtitutions

Section 1. Each team consists of thirteen players.

Note: A team must begin with thirteen players, but if it has no substitutes to replace injured or disqualified players, it must continue with less than thirteen. (Note: By mutual consent it is possible to play with more or less than thirteen players, depending upon the size of the field.)

Section 2. A player wishing to enter the game reports to the official on his side of the field, when the ball becomes dead. Time shall be declared out for the substitution. If the substitution takes more than fifteen seconds a time-out shall be charged to the team making the substitution.

Section 3. A player who has left the game except for disqualification may reenter as often as desirable.

Rule VII
Scoring and Timing Regulations

Section 1. A goal is made when a player hits his own goal ball and dislodges it from the ring with the ball in play, in compliance with the rules of the game.

A goal from the field scores one point.

Section 2. The game constitutes four periods of eight minutes duration; two minutes between the first and second periods, third and fourth periods; ten minutes between the halves.

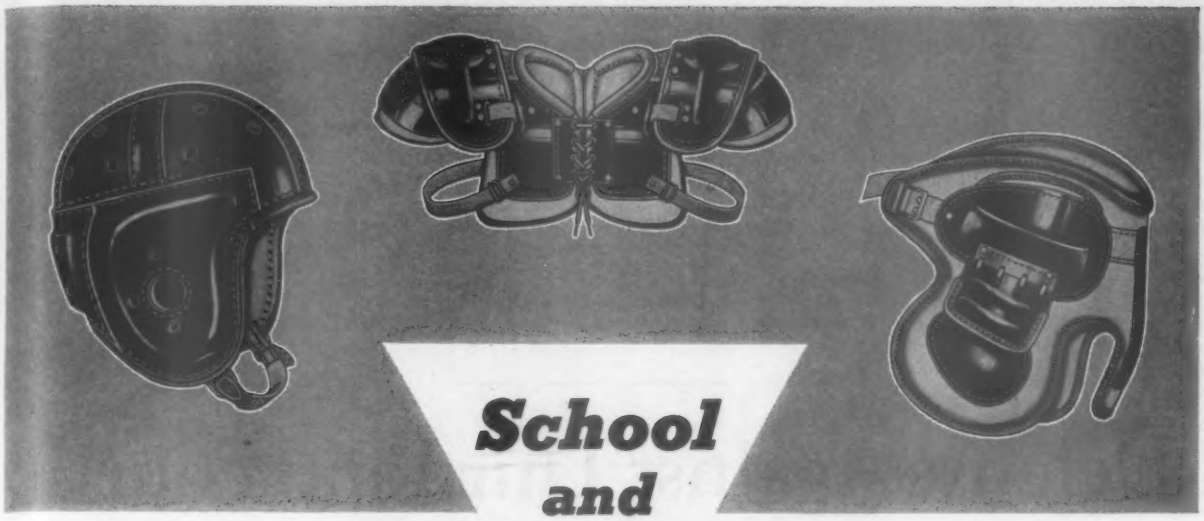
Section 3. Each team shall be permitted four times-out. The length of a time-out is two minutes.

Additional times-out will give the opposing team possession of the ball on the one-quarter line, 30 feet from their goal.

Section 4. Time out is declared: (a) When a foul is called. (b) When an official suspends play for substitution. (c) When an official suspends play to remove a disqualified player or on account of injury to a player. (d) When an official grants a player's request for time out. The official shall grant time out, only when the ball is

Rip Engle, originator of the game, demonstrates the manner in which a player passes the ball when he is tagged by an opponent.

A free ball cannot be kicked.



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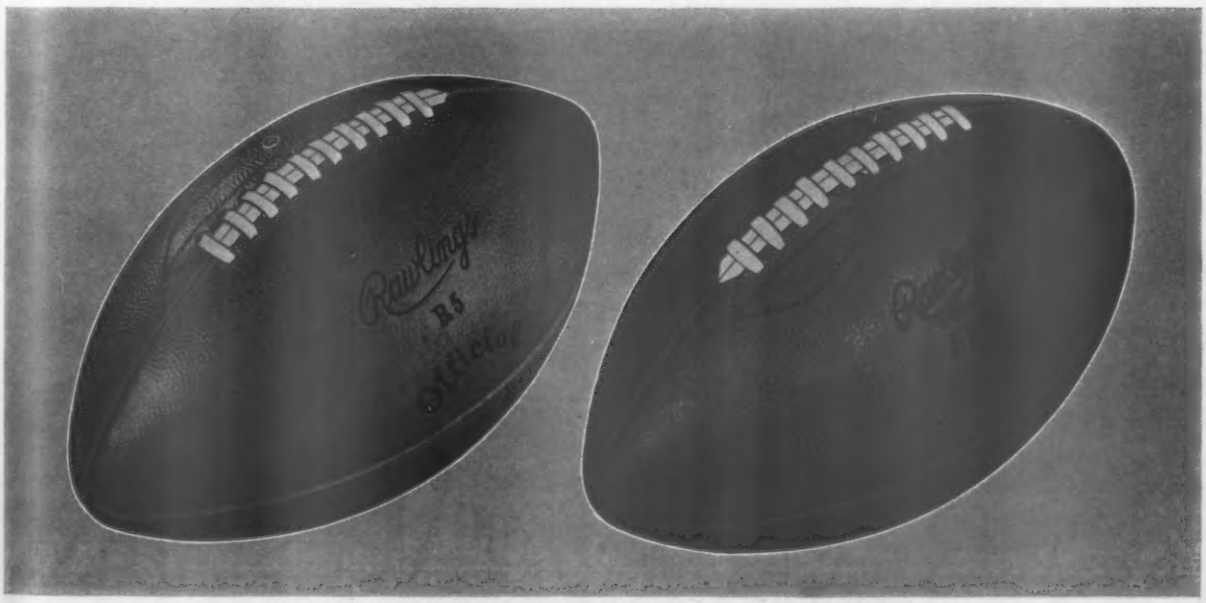

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dead or in possession of a team asking for it. (e) When ordered by an official, because of delay in obtaining the ball.

Rule VIII

Officials

Section 1. There shall be two officials on the field. They should work along the side lines. Their duty is to enforce the rules set forth and decide any disputed point. Their purpose should be to keep the game speeded up.

Section 2. There shall be one official on the side line. It is his duty to keep time,

A MEMBER of the coaching staff at Brown University, C. A. Engle, originated this game, and with the assistance of Coach J. N. "Skip" Stahley, of the Brown University coaching staff, Chief Petty Officers, C. P. Catanese and L. G. Bayless of the Navy Department, developed and introduced it in the physical fitness program classes at Brown University. Additional information concerning goal construction or any phase of the game that is not clear may be obtained by writing to C. A. Engle, Brown University Athletic Department, Providence, Rhode Island.

the number of points scored by each team, and to see that penalized players take their prescribed number of laps.

Since bell ball embodies some of the salient features of football, basketball and soccer, our three most popular activities, it has been found to be a valuable game in our physical fitness program.

Among the many items that recommend it as adapted to the war-program's demand for physical fitness work, in addition to its conditioning value, are its advantage of requiring a minimum amount of equipment and its easy adaptation to almost any type of facilities.

Defense Against Third and Fourth Down Kicking Situations

By W. W. Nicklaus
Line Coach, West Texas State Teachers College

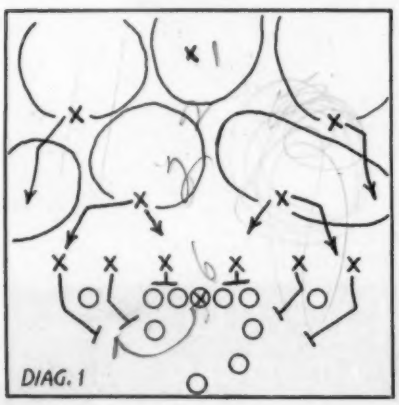
IN this day, when successful football play requires more brains than brawn, many coaches are decreasing their team's chance of victory by failing to give them a workable defense against third and fourth down kicking situations. In the six high school and ten college games that I saw last season as a scout and coach, 70 per cent of the teams were the victims of a fake kick on the third down or of a fake kick on the fourth. A defense against these situations is one of the coaches' biggest defensive "headaches" and one that I believe can be eliminated, if it is properly analyzed and studied.

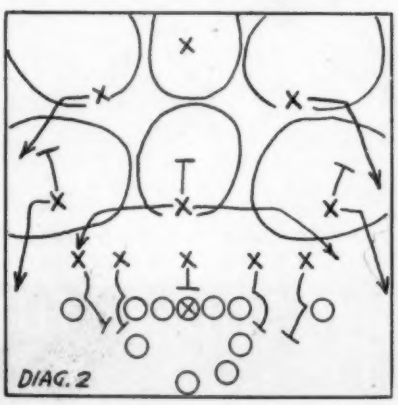
It seems to me that, instead of being constantly on the alert, our teams are taking the next play for granted. The defensive teams should always keep these things in mind; the score, the down, yards to go, the position of the ball on the field and the conditions of the field and the weather. I would rather have the ball after a successful kick by the opposition than have them make a first down or a completed pass.

If a standard third down defensive pattern is employed, the team will be more successful. For example, set up a 6-2-2-1 defense, constructed so that it will be effective against a pass, or run and, at the same time, leave the men in a position to handle a punt. This may be done as shown in Diagram 1.

Diagram 2 illustrates another defense built on the 5-3-2-1 formation. On the 6-2-2-1 defense, regardless of a short or long yardage down, the guards should play a territorial game to smother any thrusts at the middle of the line. The tackles must consider the yardage, working to the inside, once they are across the scrimmage line, if the pressure is from the inside. If the pressure comes from the outside then they must work against it. The ends play a developing game and should go across the line of scrimmage about two steps. The kicker should never be rushed on this third down. The two line-backers should play loose about three yards back, if it is a long-yardage down, and play close to check a line thrust and also check for a run, kick or pass, if it is a short-yardage down.

On the 5-3-2-1 defense, the three middle defensive men play territorially and do not allow the offensive tackle to get outside blocks, especially on long-yardage downs. The two wide defensive line men play off the inside shoulders of the offensive ends, playing a developing game once they are across the line. Outside blocks should be especially checked. All offensive development should be analyzed according to the yardage on the down. We must remember that, although the


DIAG. 1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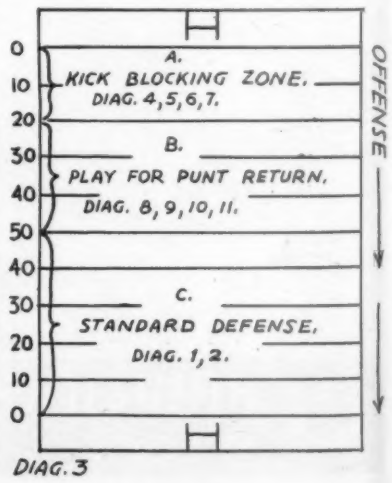

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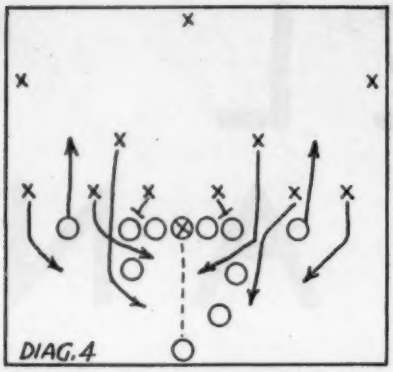
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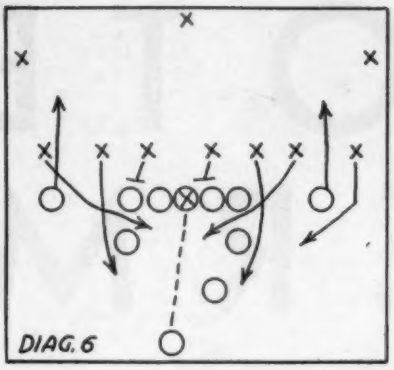
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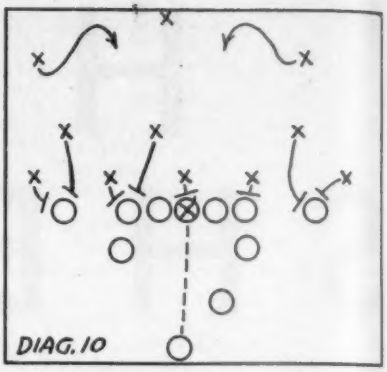
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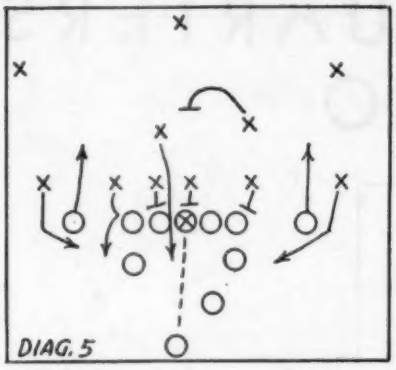
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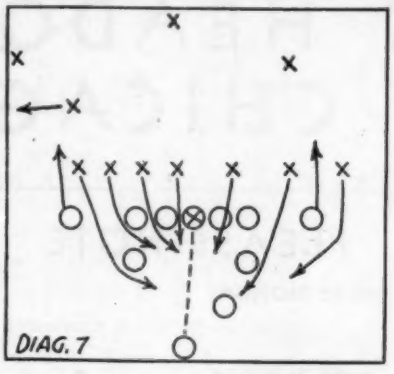
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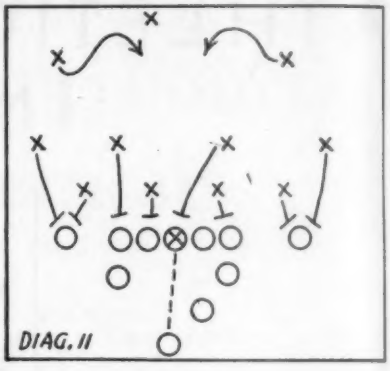
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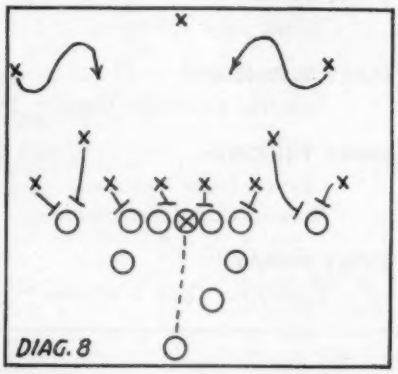
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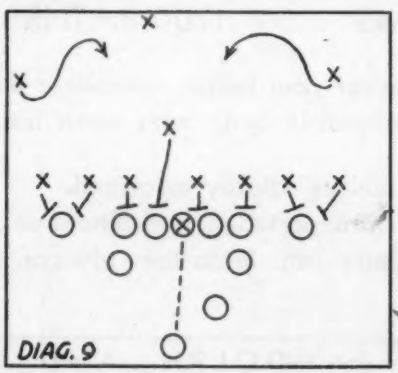
DIAG. 9

offensive men get away a good kick, we must stop anything else they may try. The outside line-backers must check for fake kickers and wide runs, and on such a development must come up fast to the outside with the middle line-backer coming up to the inside.

The two defensive halfbacks support the line-backers to their outside on sweeps. If a pass develops from a fake kick, then each defensive back covers the zone shown in the defensive pattern. If a kick is carried through by the offense, then each defensive back falls back and maneuvers in position for interference in the return of the punt. Remember, we would rather have a punt than a long yardage gain or even a first down. That is to be our attitude on the third-down play from a deep-punt formation.

On the fourth down, which is considered a sure-kicking down, the defense should analyze the situation as to score, down and yardage to go, formation, strength and direction of the wind, and condition of the field. These points should be analyzed according to the position of the ball on the field. Diagram 3 shows how to divide the field into zones for kicking defense. Zone A includes the territory from the goal line to the 20-yard line. This should be considered as the kick-blocking zone and definite plays should be constructed and mastered for this phase of defensive strategy.

Zone B in Diagram 3 is the punt returning zone, including the offensive territory between the 20 and 50-yard lines. Do not rush the punter, but concentrate on the efforts of your safety man to return the punt back as far up the field as possible. The defensive linemen and line-backers are to block the offensive linemen in such a manner that they cannot get down the field to tackle the safety man. The object of the punt-return play is to get the safety man back to offensive territory, where the offense will be in position to pull any type of open play, the quarterback chooses. Any yardage picked up on a punt return saves the hard work of gaining yardage after the defense is set against the offensive formation.

As the offensive team approaches Zone C, the possibility of a sure kick on the fourth down decreases. The probability of surprise from a fake kick, pass or run enters into the picture. So on the fourth down, the defensive team must revert back to a more standard defense. In other words, in Zone C construct your defense against the punt, so as to destroy the surprise that might result from a fake kick on the fourth down. Diagrams 1 and 2 are standard defenses that might be used here against fourth-down kicking situations.

A good defense against third and fourth-down kicking situations may be built, if the coach will analyze and study the problem. I have given the subject a great deal of thought and submit these ideas that other coaches may take them for what they are worth. I would like to know the views of some other coaches. Diagrams 4, 5, 6 and 7 show punt-blocking plays that may be used in Zone A, Diagram 3. Diagrams 8, 9, 10, 11 suggest punt-returning plays (see Zone B, Diagram 3).

Human Engineering Through Industrial Recreation

(Continued from page 18)

the view point of management in many of our industries. One of the basic principles for management to be guided by in formulating policies, as stated by Hattersley, is to "minimize the purely welfare and paternalistic aspect. Nevertheless they should be as liberal as possible in establishing policies which will permit employees to work toward their own welfare." [3]

The five "unfair" labor practices as set forth in the National Labor Relations Act for employer guidance have definitely placed limitations upon management's activities.[4] Thus management, fearing that its participation in an activity with employees might result in an investigation by the National Labor Relations Board, has become very cautious.

Factor Contributing to Impersonal Relationships

Benefits of Industrial Recreation. The foregoing discussion of disintegrating factors in industrial relationships, although not exhaustive, clearly indicates the need for an agency or activity to bridge the existing gap between individuals or groups of individuals within an industrial concern.

A re-analysis of Diehl's [5] data according to size of company reveals that a greater appreciation of the value of recreation as a contributing factor in employee-employer relationships increases as the number of employees increase. This would be expected, inasmuch as the larger the organization the greater the social distance between groups of employees and the employer and employee.

Human Engineering. Persons responsible for administrative or supervisory functions within industry often have been promoted to such positions in light of their performance on the job. These positions were usually obtained and held by virtue of the ability to lead men. This is inferred by Lowry [6] in discussing foreman selection. "Has he (the potential foreman) shown ability in leading men—could he secure their cooperative effort toward known objectives?"

In the present emergency the demands

[3] G. B. Hattersley, *Employee Relations Policies: How to Make Them Specific*, New York, American Management Association, 1940, p. 4.
[4] *The National Labor Relations Act*, Washington, D. C., Government Printing Office.
[5] L. J. Diehl, F. R. Eastwood, *Industrial Recreation*, p. 63.
[6] S. M. Lowry, *Selection and Development of Foreman and Workers*, New York, American Management Association, Production Series Number 127, p. 12.

for leadership have become more imperative, and accordingly more ways and means of discovering potential leaders should be initiated. This potential leadership may be discovered by observing the natural leaders that rise out of the industrial recreation program. The captain or manager of a team, the leader of a handicraft club, or a committee chairman of a recreational activity, represent individuals that may have administrative and supervisory abilities valuable to the industry as a whole.

Further, it may be pointed out that opportunities for social experience are lacking among many industrial workers. A study of 163 foremen clearly indicates the lack of social recreation activities.

"As a by-product of this study it is interesting to point out that 45 per cent of the foremen stated that they belonged to no (social) organization. Thirty-five per cent belonged to one and 20 per cent to two. Fifty-three per cent listed some form of social recreation such as bowling, horseshoes, chess, cards, etc. Forty-six per cent reported solitary recreations, such as growing roses, constructing radios, photography, etc." [7]

If the foregoing is representative of a foreman's social background, one can well imagine the extent of participation by the average employee. Here again is seen the benefits that may be received from a recreation program which includes a broad range of social-recreational activities.

Personal Contacts. The opportunities for personal contacts between employer and employee are greatest in the physical activities. This is understandable, inasmuch as softball, basketball, and baseball, as well as bowling, have a wide appeal to male employees.

Bowling promotes more sociability than other athletic activities but not more than activities of a social nature. Several factors have contributed to the social aspect of bowling. There is no bodily contact between participants. Both sexes of all ages have shown an interest in the activity. Then too, the interim between frames presents opportunities for social contact between participants, not available in other athletic activities.

Planning and Initiating the Program

The national defense program has probably furnished more impetus to recreational planning than any other one factor. Numerous private, state, and federal agencies have assumed the responsibility for meeting the recreational needs of our armed forces as well as our civilian workers.

If the planning of these agencies is to become effective for our industrial workers, the workers and the employers should co-operate in every possible way. It is hoped that the following may set forth contemporary practices in program planning and initiation.

A review of existing recreation programs for industrial workers reveals that the extent and scope of the individual company programs vary extensively. This diversity of program content substantiates the statements of Butler concerning recreational interests: [8]

"Recreation interests cover the whole field of human interests. The forms of recreation in which people engage vary as widely as the interests of a single individual throughout his lifetime and are as diverse as people are different from each other. Yet this diversity of an individual's interests is small in comparison with the difference in the recreation interests of a group of people."

Initiating the Program

The success of any recreation program depends to a great extent upon the number of individuals participating. The administrator should seek the aid of the various groups in program planning, since regimentation defeats the purposes of the recreation program. Employees must adjust themselves to the program. Employee initiative, therefore, should always be encouraged when the program is started or when new activities are being introduced.

Several companies have expended large sums of money on recreation centers for employees. Extensive programs were planned, published, and distributed among the workers. The majority of these programs failed. Why? Because the programs reflected the recreational interests of the leaders and were not based upon the interests of the groups to be served. The more progressive programs are those which have evolved from the workers' interests and have been co-operatively established.

The administrator may be invaluable to the employees in supervising the program planning. He should discover the interests of the employees, get the individuals having common interests into groups and let them assume the major responsibility for program planning. In this way the program of activities develops as the employees' desires for more activities expand.

Many recreational activities do not require extensive planning and organization. Radio programs, reading, checkers, chess, etc., are enjoyed by thousands of individuals and are informally organized. Competitive sports and similar activities become more popular with the workers when leagues are formed and regular schedules are played. It is essential, therefore, that organizational techniques and planning should be carried out by the leaders.

Inasmuch as many industrial recreation programs have failed because certain factors in program planning have been overlooked, the following paragraphs will be devoted to the common practices in program initiation.

The Organization Committee. The initial step to be taken is that of selecting the personnel of the organization committee. This committee should be composed of representatives from both management and employee groups. It is essential that these individuals have the confidence and respect of the entire personnel of the company.

The Petition. A petition should be circulated among the workers and the management group to ascertain the desire for a recreation association. The petition is a safeguard against the efforts of a small group within the company to sell the management or a labor organization on such a program when the majority may not desire it. If the response to the petition clearly indicates a desire on the part of the entire company personnel for such an organization, the committee should waste no time in completing its task.

Meeting of Organization.[9] A temporary board of directors and the executive officers should be elected at this time. A constitution committee should be appointed to adopt a constitution and bylaws (previously proposed in tentative form) for the organization which should be placed before the interested group for its ratification. Other committees as discussed below should be appointed.

An interest survey should be constructed by another committee. This should be distributed among all employees of the company. The survey forms should be collected and tabulated and the various interest groups identified.

A committee on facilities representing both management and employee groups should be appointed. This committee should determine the extent to which public, private, social, and commercial facilities could be used by the association. A meeting could be called by this committee to which the community recreation director and program administrators of other agencies should be invited. In this way the committee could gain the co-operation of these individuals, as well as determine the available and needed facilities within the community.

A nominating committee should be appointed for the purpose of sponsoring the election of permanent officials. The specific functions to be performed by the nominating committee should be established in the constitution and bylaws.[10]

[7] S. M. Lowry, *Selection and Development of Foreman and Workers*, New York, American Management Association, Production Series Number 127, p. 12.

[8] G. D. Butler, *Introduction to Community Recreation*, New York, McGraw-Hill Book Company, 1940, p. 193.

[9] Duggins, G. H. and Eastwood, F. R., *Planning Industrial Recreation*. Lafayette, Indiana. Purdue University, 1941, pp. 55, 57, 76, and 80.

[10] Op. Cit., pp. 59-61.

Suggested duties of the various officials should be outlined in the bylaws.

Election Meeting. At this meeting the constitution and bylaws should be presented for ratification, and permanent directors and executive officers should be elected. As soon as possible after the election, the various committees deemed essential to efficient administration should be appointed.[11] From this point on, the organization should be able to assume the responsibility for administering the affairs of the association.

The program content in industrial recreation associations should be evaluated in the light of certain criteria. New activities suggested by individuals and groups should be checked to determine the extent to which such activities will meet stated standards. No one activity will meet all standards; however, only activities which meet the greatest number of the standards or criteria should be included in the program.

Program Administration

An industrial recreation program is one that is organized within a company or plant for the express purpose of meeting the recreational needs of the group concerned. To whom has the responsibility been delegated for administering existing programs? Does the form of administration differ in companies of varying sizes or is there a general pattern applied throughout the industrial recreation organizations? These and other pertinent problems will be discussed as they relate to program administration.

Administrative Responsibility

Volunteer employee groups and appointed employee committees have assumed the major responsibility for administering the recreation programs in companies of all sizes. Companies having more than 2,500 employees, however, prefer to place the administrative responsibility upon a recreation director. This is not unusual, for the problems which arise in the recreation program should have immediate attention, especially in the more extensive programs. The services of professionally trained and experienced leaders, therefore, are extremely valuable.

Recreation programs administered under the direction of part or full-time leaders are broader in scope than are those administered by volunteer groups, or appointed employee committees.[12]

Professionally trained leaders should be selected for their executive ability and thorough knowledge of the field. They will utilize employee initiative by directing its efforts rather than by forcing the employees to participate in a program of

[11] Op. Cit. p. 55.

[12] Diehl and Eastwood, *Industrial Recreation*, pp. 36-37.

activities which reflect the leader's interests. Thus a more extensive program results. Industries or employee recreation associations, having professionally trained directors, have invested larger sums of money in the recreation programs. This investment combined with professional leadership should result, and has resulted, in broader programs. These statements are substantiated by the findings of Diehl and Eastwood.

Personnel

Regardless of the size of company, the majority of persons questioned expressed the opinion that the recreation director should be directly responsible to the personnel manager. The second choice was that of making the recreation director responsible to a vice president of the company.

Since very few recreation programs are financially self-sustaining and top-management contributes the deficit, it might be advisable to have the director of recreation responsible to a vice president. There would be certain advantages under these circumstances. The director would not have to rely upon the personnel manager or anyone else to present his problems for him. Opinions rendered by the executive concerning internal and external policies would be final. This would result in more efficient administration and would undoubtedly be the best procedure to follow when a full-time director was administering the recreation program.

Although many of the smaller companies would prefer the services of a full-time director, they have not deemed it advisable to pay a full-time director for these services. There is a general trend, however, toward full-time professional leadership as the size of the company increases.

Inasmuch as most of the companies fall into the smaller employment brackets, they have endeavored to get professionally trained recreation leaders. Companies having up to five hundred employees have relied upon the tax-supported agencies for trained leadership. Those employing more in the majority of cases have part-time recreation directors. Here it is a common practice for the recreational director to have dual responsibilities. The director generally functions within the personnel management division and supplements his work there in administering the recreation program. Such practices are profitable to both the company and the recreation association.

It would be advisable for the smaller companies either to join forces with other small concerns in a municipal industrial recreation association or to try to develop better qualified leaders within the employee group.

A Letter to Physical Education Teachers

THE accompanying letter, with the writer's permission to print it, was recently received from a former basketball coach of a large mid-Western high school. The writer is with an infantry medical detachment and is in a position to write authoritatively from his observations. We have been stressing the values, both of calisthenics and athletics, and here is a letter written expressly for the coaches and physical educators of the high schools, emphasizing again these values.

Dear Sirs:

YOU have probably read many articles, attended numerous conferences and participated in frequent discussions on the general subject of preparing students for military life. The importance of this subject is unquestioned. It is important for the maintenance of the physical health of the individual, for the morale of the troops, and finally for our national security. A large majority of the students in your classes today will be in uniform within a few months. Stories from Guadalcanal, Bataan, and North Africa have convinced us that this is not a war of intellects. While mechanical genius is playing a very important role, nevertheless it remains for the mass of our armed forces to furnish the very necessary element of brawn. It falls to the high school and college physical education programs to prepare these potential sailors, soldiers and marines for the physical test which life in the service presents.

A large percentage of the students who reach the military age while still in school will wait to be drafted. Likewise, a large percentage of those who volunteer their services before being drafted will enlist in the army ground forces. Therefore it seems safe to assume that a large portion of your classes will eventually find their way into the infantry, for it is there that man power is needed in increasing numbers. No matter how highly mechanized a war becomes, it seems eventually to degenerate into a pitting of mass against mass of foot soldiers. The brave defense of Stalingrad, while characterized in its early stages by mechanical might, eventually turned out to be a battle between the masses of foot soldiers. Similar instances in Guadalcanal, Africa, and China only serve to bear out the point that the infantry will be needing and getting large portions of our draftees.

This merely serves to impress the fact that the physical qualifications of a good infantry soldier must be a guide post to the educator whose objective is "the greatest good for the greatest number." What then are the physical requirements of the infantry? After reading accounts of infantry combat over the world and having actually gone through the intensive training in preparation for combat, I suggest these musts for primary consideration:

1. The infantry soldier must be able to endure the hardships of a truly strenuous outdoor life.
2. He must be able to walk long distances without tiring or becoming incapacitated.
3. He must have confidence in his own physical prowess. (Guadalcanal taught us a lesson in this regard.)
4. He must have the stamina and reserve to fight off common diseases.

First take a hasty glance at an army doctor's record. It is the army doctor's responsibility to keep a record of every treatment that he is called upon to make, though it be only puncturing a blister. For fear of giving away valuable information to our enemies, I will not deal here in actual figures. It is safe to say, however, that in this area much of the army doctor's attention is taken with (1) upper respiratory diseases (principally nasopharyngitis, pharyngitis, laryngitis and bronchitis); (2) foot ailments (including metatarsalgia, tenosynovitis, and blisters). Obviously, the two above-mentioned infirmities of the infantryman are direct results of a strenuous outdoor life and long hikes under pack. Please understand that the location in different parts of the world will change slightly the list of ailments of the soldiers. Outdoor life on Bataan added malaria to this list. Hiking in Alaska added frostbite. Let me impress once more the importance of preparing for (1) hardships of life in the field, and (2) a physical beating taken by the feet of a soldier.

What can physical educators and athletic coaches do to make our infantry the best possible? I have always been a firm believer in "learning to type by practicing on a typewriter." You cannot train infantry troops in your classes. It is impossible to take a twenty-mile hike in the course of an hour period. Likewise, you certainly would be severely criticised for having your class crawl for a quarter of a mile in a driving rain or a sleet storm, and then leave them to spend the remainder of the day in soaked clothing. The army can do that, but I would advise against you doing it. It is the job of every director of physical education to devise his own program, taking into account the existing conditions and still meet the above-mentioned needs of the infantry. It would be foolish to set up a definite course

of procedure to meet the conditions under which the various schools work. I can make a few general suggestions which may give a start toward improvising a program.

During the class period calisthenics may be profitably employed in general physical conditioning. The troops go through calisthenics every morning. Maneuvering to get into correct positions for firing a rifle is almost a course in calisthenics in itself. Students may also be given practice in the "art" of falling to the prone from a run. They will find good use of their learning when diving into cover with a rifle clutched in both hands. Head stands, shoulder stands, and exercises which develop the neck muscles will be found of value, when a boy is called upon to wear a heavy helmet for hours which run into days. A limited number of exercises may be of value in developing leg and foot muscles which will come into play on those long marches.

Probably of greatest value will be the organization of hiking clubs or groups encouraging walking, making walking in all kinds of weather a pride among the students. Understand, please, that it is that constant pounding day after day for which the student must prepare himself. If the athletic team is playing in a city eight or ten miles away, why not organize a group to walk to see the game? The infantry marches night and day, in cold or heat, and next year these boys may be wearing the crossed rifles insignia of the infantry.

I also suggest greater emphasis on the competitive sports. Track, football, wrestling, boxing and basketball probably will be of greatest value. A good infantry soldier must have the stamina required in these sports plus the confidence that he can "take it." The boy who finishes a race, opens a hole for a touchdown plunge, or rebounds to score the winning point has gained something which is very valuable. He has gained confidence that his body can be made to go on, even though he feels like dropping out.

Your student is going to march. He is going to march through the heat of the jungles, through the snows of the tundra and through the sand of the desert. He will march with blisters, bruises and tired muscles, but he must keep going. Death is the doom of the straggler in Guadalcanal. Let's give the next soldier a physical education which will equip him for the rigors of the life ahead of him.

Baseball and Its Contribution to Physical Fitness

(Continued from page 14)

petitive baseball on a well-coached basis. Every coach and educator who takes his job seriously should seek to educate the community to the training value of good competitive baseball. Every father and mother should be told that a well-drilled ball player has learned reactions that will help when the going is tough.

All this will require hard work on the part of the coach, much harder than that of putting the boys through calisthenic drills, or running them over obstacle courses. This will require ingenuity and planning to make it effective. It is senseless to say, however, that we cannot take a national sport that we believe provides the essentials of training which our boys need, and use it to its fullest advantage at a time when it is most needed.

In our school we have always had intramural baseball for the younger boys and interscholastic schedules for the older ones. The intramural teams are coached and drilled on the same basis as the others and their rivalry is keen. The competitive element is stressed in both groups. This year we are going to run the same program and we feel that the boys will be even keener for it than heretofore, because during the winter much of the program has been given over to body-building exercises, climbing, marching and running. The boys worked hard and enjoyed the winter program, but even now are clamoring to get going in baseball, and looking forward to competition in it with renewed fervor.

A Special Appeal to High School Victory Corps

By John W. Studebaker
United States Commissioner of Education

MANY non-farm high school students will discover that their greatest contribution to the war effort will consist of farm work to increase the production of food. The Victory Farm Volunteers is proposed as an organization which will accomplish this purpose.

The Office of Education of the Federal Security Agency and the War Manpower Commission and the Extension Service of the United States Department of Agriculture on the federal level have agreed upon the respective functions which they will assume in this program.

It is proposed that all High School Victory Corps stress this Victory Farm Volunteers program as one of the important activities of the Corps. The high school will, therefore, recruit and train Victory Farm Volunteers for service on farms during the summer months and at other times. Victory Farm Volunteers will be drawn from the general membership of the High School Victory Corps as well as from the five special service divisions.

President Roosevelt, in his radio address of October 12, 1942, said in part:

"The school authorities in all the States should work out plans to enable our high school students to take some time from their school year, and to use their summer vacations, to help farmers raise and harvest their crops, or to work in the war industries. This does not mean closing schools and stopping education. It does mean giving older students a better opportunity to contribute to the war effort."

Nowhere are the services of youth more needed than in the production of food for ourselves and our allies. Food production is important not only as a prime factor in winning the war but will be just as important in winning the peace.

Organization of Victory Farm Volunteers

The chief state school officer of each state in co-operation with the director of the high school victory corps should appoint the state supervisor of agricultural education or some other member of the state agricultural education supervisory staff as state supervisor of the Victory Farm Volunteers. In each high school where the Victory Farm Volunteers are to be established, some member of the high school faculty should be appointed its adviser.

The superintendent of schools or the principal of the high school can perform an important service to the Victory Farm Volunteers through the careful selection of its adviser. The faculty adviser of the Victory Farm Volunteers should have a good farm background, should have had successful experience in youth leadership, should have a considerable amount of available time and should be enthusiastic about the work.

If there is a department of vocational agriculture in the high school where the Victory Farm Volunteers are established, the teacher of agriculture may well serve as adviser, aided by the local future farmer or new farmer chapter.

TRAINERS JOURNAL

SECTION

The NATIONAL ATHLETIC TRAINERS ASSOCIATION

ARCH, 1943 No. 7

Official Publication
Of the National Athletic
Trainers Association

Head Trainer, Billy Fallon (center) Lieutenant (j. g.) Dobelay (left) and Bob Officer (right), assistant trainers, keep close tab on the cadets at St. Mary's Pre-Flight School.

Treatment of Ankle Sprains

By Fitz Lutz

Civilian Trainer, United States Navy Pre-Flight School, Athens, Georgia

IN the opening article of this series, Hank Crisp described the ankle wrap which has been used so effectively as a preventive during the rigorous physical conditioning of aviation cadets here at the Navy pre-flight school at Athens, Georgia.

The occurrence of sprains, shin-splints or arch trouble has been so rare here among wearers of the wrap, that it would be impossible to overestimate its value in a program such as ours. Because each of our future Navy pilots is scheduled to emerge a few months hence as a perfectly conditioned instrument of war, any preventable injuries which might delay fulfillment of this mission are morally chargeable against the trainers.

Despite utmost vigilance, however, ankle sprains do occur. When they do, it is important that treatment be given at the earliest possible moment; otherwise its effectiveness will be materially lessened and the suffering unnecessarily prolonged. The accompanying illustrations show the method of treatment in use by our staff of trainers. These do not, however, cover the application of heat therapy—a subject which is discussed at length by our Athens Pre-Flight colleague, Bill Dayton, in another article of this issue.

In Illustration 1, the circle shows the location where a sprain most frequently occurs, owing to the ankle's greater tendency to twist to the outside.

Illustration 2. After the hair has been shaved from the lower leg, two-inch adhesive is applied tightly, extending from the base of the toes counterclockwise, upward around the arch and ankle joint. Pressure is lessened as wrapping goes upward. The reason for applying greater pressure at the toes is to keep this area clear of the hemorrhage and swelling. This is particularly desired because the minute size of the toe capillaries makes swollen toes rather difficult to treat. The object, therefore, is to force the congestion upward toward the body where it can be carried off more quickly by the larger blood vessels. The wrapping as seen in Illustration 2 is then completed with another half turn, being secured to the anchor strip at the Achilles tendon.

Illustration 3. Two strips (1 and 2) are successively applied, extending from the top of the anchor strip at the inside of the ankle, under the heel and back up to the anchor strip on the outside. These two "stirrup" strips are not drawn very tightly. Strip 3 is then brought from the base of the great toe along the longitudinal arch, parallel to the axis of the foot, around the heel, and back along the outside of the foot, ending behind the small toe. Strips 4, 5 and 6 are then successively added in parallel layers that build upward toward the ankle. Strip 7 is spiraled upward as shown in the illustration, so that its upper edge, after passing around the Achilles tendon, will coincide with the top of strips 1 and 2 on the outside of the foot. The taping is then complete.

WHEN Fitz Lutz signed up with the Navy as a member of the civilian trainer staff at the pre-flight school, Athens, Georgia, it did not require much traveling to get there. As head trainer for the University of Georgia since 1938, Fitz had been a popular fixture on the Georgia campus long before Navy pre-flight arrived last spring to take over a number of the university buildings and athletic fields for aviation cadet training. Round-faced, jovial, and intensely devoted to his job, Lutz is as much a favorite with the Navy's fledglings as he was in the past with Frankie Sinkwich & Co. Fitz came to Athens in 1938 after three years as assistant trainer at Louisiana State.

Illustration 4. A prop, as shown in Illustration 5, is next placed under the leg to keep the ankle elevated at least eight inches. Ice bags filled with tightly packed crushed ice are then applied as shown in Illustration 4. Throat bags like these give the most satisfactory results, because they are flexible and tie easily into position. The ice is kept on the ankle from forty-five to ninety minutes, but must be removed briefly at fifteen-minute intervals to prevent frostbite.

For best results the ice application should be made within fifteen minutes after the ankle has been sprained. It may, however, still be beneficially used as late as ninety minutes afterward. If no ice has been applied by that time, it will probably be best to omit the ice treatment altogether, because the toes are probably swollen by that time, and the contracting effect of the ice on the vessels would lock the swelling into the toes instead of locking it out.

After the ice bags are removed, a pad of sponge rubber is anchored under the heel with adhesive (Illustration 5). This elevates the heel and permits the patient to walk on it with his foot in a normal position, with weight on the toes. The patient then goes to the dispensary for X-ray. If there has been no fracture, he returns to the trainer for further treatment after twenty-four hours. The various types of heat treatments used here is covered in an accompanying article in this issue. The taping is removed when the four-day series of heat treatments begin.

After each day's treatment a new bandage is applied as shown in the following illustrations:

The adhesive and the heat treatments having combined to make the skin highly sensitive, a two-inch gauze bandage is wrapped counterclockwise around the instep and ankle joint and anchored with adhesive (Illustration 6).

Over the gauze wrapping, two-inch adhesive tape is applied in basketweave fashion as shown in Illustration 7. Strip 1 is the anchor strip which goes once around the leg about four or five inches above the ankle joint. Strip 2, the first stirrup, extends from the anchor strip at the inside of the leg, under the heel, and is then pulled upward tightly to the outside and secured to the anchor strip. Strip 3 starts on the inside at the top of the longitudinal arch, is brought around the heel, parallel to the axis of the foot, and terminates at the front. Strip 4 is then applied in the same fashion as 2, overlapping the latter, and about one inch to the front. Strip 5 is then applied in the same manner as 3, overlapping the latter and about one inch higher toward the ankle joint. Strip 6, the third stirrup, is applied like strips 2 and 4, overlapping 4 by about one inch, and terminating at its own point of origin.

To complete the basket weave, strip 7 is then applied in the same manner as 3 and 5, one inch higher than the latter (Illustration 8). Next, beginning with strip 8, the taping is applied in figure-8 fashion. Starting from the front of the ankle bone at the outside and swinging to the inside and under the longitudinal arch to the outside, it is carried upward over the instep as shown here. Next it will cross at


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USNR


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the point of extension and flexion of the foot, continuing to the inside, around the Achilles tendon and across the center of the outside ankle bone.

Illustration 9. The same strip of tape (8) is then continued in another figure-8 movement, taking the same path it followed in the first movement. Thus, as shown in this illustration, 8C lies directly over 8A; and 8D lies directly over 8B. Then, over the terminal point 8E, strip 9 is wound once around. Another short strip, 10, completes the wrapping as shown.

This bandage is changed once a day, being continued long after the heat treatments have ceased and the cadet has returned to competition. The foundation of gauze should always be applied first. The use of this taping, though considerably more of a nuisance to apply, is recommended in preference to the common ankle wrap (see article in the February issue) for the remainder of the season, or until the ankle is completely normal.

Physiotherapy Speeds Repair

By O. W. "Bill" Dayton

Civilian Trainer, United States Navy Pre-Flight School, Athens, Georgia

IN the swift prosecution of this global war, two factors of top importance to our fighting forces are time and condition. Time is of the essence in producing planes, guns, tanks, ships, in delivering supplies, in striking lightning blows through land, sea and air. Condition—the physical condition of men and machines—is what makes our time schedules possible. Without it, production would lag, supply lines would falter, troops would be ineffective.

Conversely, the precious element of time is a major consideration in all problems which involve the maintenance of condition. War's urgency calls for utmost speed in the repair of vital units—whether they be machines or men.

Among our fighting men, and among those who are being trained to join them on tomorrow's battlefronts, injuries are of course inevitable. But the most frequent injuries are often those which might as easily be encountered on the football field or in the gymnasium, the type which can put a man on the sidelines at a critical time without necessarily doing him permanent damage.

ONE of the few graduate physiotherapists in the training field, Bill Dayton came to the Navy pre-flight program from the post of head trainer at the University of Miami, Coral Gables, Florida. Although only twenty-eight, he holds sheepskins from the Eastern School of Physiotherapy and the Swedish Institute of Physiotherapy, New York. At Miami, he also made a special study of X-ray.

The last war taught us many valuable lessons in the repair of such injuries, developed many new methods which hastened the processes of Nature. Physiotherapy had its meager beginnings in that war. Today physiotherapy is a full-grown science, doing a remarkable job in getting men off the injured list on time.

By definition, physiotherapy is the treatment of physical disorders with heat, light, electricity, massage and water. In our Navy base hospitals it is widely used in its various forms—thermotherapy (heat), actinotherapy (light) hydrotherapy (water), and electrotherapy—to rehabilitate men quickly, to heal injured tissues, to re-educate muscles.

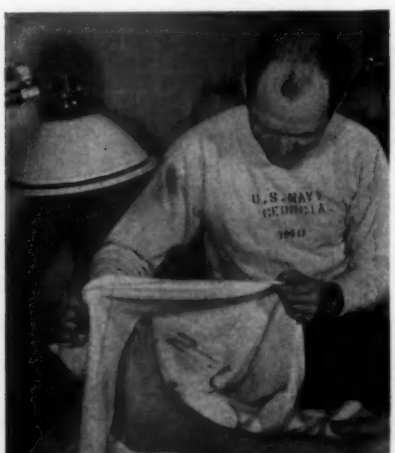
Here at the Athens Pre-Flight School where twenty-four hundred future Navy fliers are engaged in a strenuous conditioning program, we find it equally useful in the treatment of athletic injuries.

Gone forever is the old saying "Once a sprain, always a sprain." No longer need a man carry the effects of a badly sprained ankle or knee for the rest of his life. Proper use of physiotherapy is the modern answer to all that. Not so long ago the treatment for a sprained ankle was to prop it on a pillow for about ten days, after which the patient learned to walk all over again, with crutches. Physiotherapy has today's athlete or fighting man back on his feet in three days.

To a man injured in training or in athletics, his best friend is usually heat, if properly applied at the right time. A common and often harmful error, however, is the application of heat too early. A sprained ankle, for instance, should first be strapped, elevated and treated with ice, as discussed elsewhere in this issue by Fitz Lutz. This arrests the spread of congestion which too early use of heat would only aggravate.

Since the sprain takes about twenty-four hours to have full effect, the injured joint (ankle or otherwise) should be elevated and rested as much as possible from thirty-six to forty-eight hours. The taping is then removed before the heat is applied. Removal of the taping is important except where diathermy of the short wave type is used. Otherwise, a chemical reaction will cause skin tenderness.

Where short-wave diathermy, preferable in deep-seated sprains is not available, the infra-red heat lamp provides an excellent substitute. The common practice here among the members of our trainer staff is to apply the infra-red heat for twenty minutes, keeping the sprained joint elevated and well covered with a towel. Elevation prevents further swelling; the towel prevents burning of the skin. Intense heat has a tendency to constrict the blood vessels and may even do them permanent damage. Therefore, mild heat for about twenty minutes, with the lamp at a distance



Covering the skin with a towel is an important precaution when the infra-red lamp is used. Mild heat for twenty minutes with the lamp about twenty-four inches away is preferable to intense heat for a short period.

Where moist heat is indicated, the churning waters of the whirlpool bath know no superior. Ten minutes at 110 degrees Fahrenheit are believed, in most cases, to be equal to a whole day of massage.

tance of two feet, is preferable. Absorption of the hemorrhage will take place far more satisfactorily under these conditions.

Where short-wave diathermy is used to achieve greater penetration, the same caution should be observed against too intense heat. Otherwise, the patient will experience aching and discomfort. Although some physiotherapists regard discomfort as a normal by-product of diathermy, I am firmly of the belief that its avoidance will bring far more desirable results. In the use of short-wave diathermy, it is also important that sufficient padding be provided between the electrodes and the skin. The same care should also be exercised with the induction cable method.

Although some of the newer developments in the science of physiotherapy have superseded it, the use of massage still has a definite place in the treatment of athletic injuries. Light massage—stroking or kneading—is most effective directly following the infra-red heat treatment. In joint injuries, an easy stroking motion above and below the injury for about five minutes will help prevent the atrophy of muscles from disuse. More vigorous forms of massage, such as tapotement (hacking, etc.) should, in my opinion, be reserved for the rub-down table and never be used in the treatment of injuries.

In mild sprains, heat and massage treatments may be found unnecessary, proper strapping and exercise being sufficient to effect a cure. In more severe cases, however, the daily use of heat and massage is recommended as long as inflammation persists.

After tenderness has been sufficiently reduced, it is well to abandon the lamp or diathermy in favor of the whirlpool bath. This will obviate the weakening effect which might otherwise come from overtreatment with heat. The whirlpool has the advantage of allowing the sprained joint to be exercised while immersed. Ten minutes a day of the whirlpool treatment at 110 degrees Fahrenheit will bring quick results.

Just as we must guard against too early use of the infra-red lamp, so also must we avoid using the whirlpool before such treatment is indicated. If, for example, we were to use the whirlpool instead of the lamp on a newly sprained ankle where a hemorrhage condition still existed, we could expect to see it swell like a balloon. With the foot hanging in the water, the force of gravity and the greatly stimulated arterial circulation would cause an accumulation of blood which the impaired venous circulation could not accommodate.

As already pointed out, the physiotherapist treats all injuries to joints along the same general lines. Injuries to muscles and tissues call for a somewhat different procedure. The pulled muscle is often confused with the Charley horse, though they are actually quite different. Usually caused by a quick start or other abrupt muscular

In shoulder injuries, the hot needle shower is especially valuable. The injured shoulder may be freely exercised while receiving the water's massaging effect.

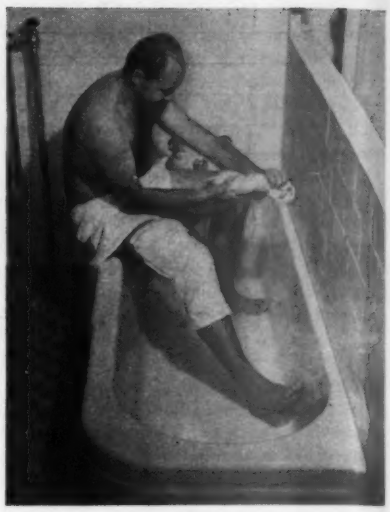
extension, the pulled muscle is commonly attended by internal bleeding which results from the severance of small muscle fibres. The Charley horse, on the other hand, is a maceration of the tissues against the bone from an outside blow.

The pulled muscle should first be treated with cold packs, then rested from twenty-four to forty-eight hours, until the injury has reached its peak development. The moist heat of the whirlpool will then prove most effective. With this the important factors are rest and support with elastic bandage rather than adhesive. To insure against recurrence of the injury, it is essential that the patient be kept under treatment and the muscle firmly supported even after all visual effects have vanished.

Treatment of the Charley horse is a different problem. Cold packs are used at the outset for about twenty to thirty minutes. Then, after a rest of twenty-four to forty-eight hours, we apply infra-red heat for twenty minutes, followed by five minutes of light massage. Next a hot pack of one of the commonly known brands of counter-irritants is applied. This is covered with a layer of cotton and wrapped with elastic bandage until the next day's treatment. When most of the tenderness has gone, we discontinue the infra-red treatments and use the whirlpool. Caution is urged against sending the athlete back into action too soon, or without proper padding and support.

In all injuries where moist heat is indicated the whirlpool, when used at the proper time, knows no superior. Its value in the treatment of sore muscles, contusions, bone bruises, or common arch ailments resulting from flimsy gym shoes, is so great that twenty minutes immersion in its churning waters is believed equal to a whole day of massage.

The common shower or bathtub has its place, too. The hot shower is especially valuable in shoulder injuries where diathermy is not available, or where the use of the whirlpool would be awkward, if not impossible. Under the hot needle shower, the shoulder may be freely exercised while



Continuous application of hot towels provides a reasonably good substitute for the whirlpool, when the latter is not available.

receiving the water's massaging effect. The athlete finds it most convenient, too, since it is accessible as often as he desires. The bathtub is a reasonably efficient substitute for the whirlpool in injuries to the lower body, where the patient may keep the damaged area immersed. Continuous application of hot towels to an injured knee may be accomplished with a minimum of inconvenience with the athlete seated on the edge of the tub.

Ask Me Another

By Lil Dimmitt

Head Trainer and Varsity Track Coach, Texas A&M College

THE first of the series of questions and answers to appear in the *Ask Me Another* column is devoted to equipment. Your questions need not be limited to this phase, but may include those on treatment of injuries or training room practices, and, if not too swamped with training questions, I'll take on some about the various sports.

Question: Why can't the rules be changed so that my extra-point kicker can take off his helmet to try for the point? He says it bothers him and he misses. We lost a game last season because he missed one that counted.

Answer: We trainers fought a long time to get that rule in the books and we intend to fight any move to take it out. Your boy is in as much danger on that play, as he is, if he were punting, and we hear few requests to let him take off the helmet then. Most boys never think of taking it off then, so why take it off for the try for point. Teach your players to wear their helmets all the time they are on the field, be it dummy scrimmage or the actual hard contact. We do that at Texas A&M and if fellows by the name of John Kimbrough, Bill (Jitterbug) Henderson, Joe Routt, Felix Bucek, Marshall Robnett and Joe Boyd can make All-America under our system, then there must be something to it. None of them ever suffered from a head injury or complained about wearing their helmets while on the field, even for usual limbering-up exercises before we start real work. Your boy is merely using the rule as an alibi. Talk him out of it.

ONE of the better known trainers of the nation, Lil Dimmitt, who has appeared at many coaching schools, has consented to conduct a trainer's column and, herewith, answers some of the questions asked him at past coaching schools. Perhaps the answer to some of your problems are in this list. If not, write him at Texas A. & M. College, College Station, Texas, and the question and answer will appear in future issues of the ATHLETIC TRAINERS JOURNAL. The readers of the JOURNAL last year will remember the statement made in Lil Dimmitt's article, "We give a standing invitation to all high school trainers and coaches to submit to us any training questions they may have and, if at all possible, we send off the reply by return mail. At times we have sent our replies by telegram." Since Dimmitt was accustomed to rendering such service as this, he was the natural to head up the "Ask Me Another" column. The editorial staff of the TRAINERS JOURNAL is pleased to present Lil Dimmitt to its readers. Send him your questions. Editor's note.

Question: What do you think about wearing shin guards?

Answer: All during the season the linemen should be protected by shin guards. There is too much leg whipping in the line and they are apt to receive an injury which will place them on the bench just when you need them most. Shin guards avoid bruises and have players in shape for Saturday, so have them wear them in practice all week as well. Felix Bucek and John Kimbrough, a fullback, always wore them and they both

were pretty fair country-ball players. Perhaps you use them on bruised legs only, but I advise wearing them on both legs, if one is bruised as that one is an invitation for the opponents to work on the injury and take the man out of action sooner. We learned that lesson when Kimbrough hurt one leg. We put a guard on it, and that day the opponents seemed to work on that sore leg. We took him out, put a guard on the other leg and it so confused the tacklers that they forgot which was the hurt one and he was able to play out the full game without any more trouble.

Question: I seem to have too many shoulder injuries. What can you attribute that to?

Answer: Probably, you are using worn pads or have not taken the trouble to fit them to your players. Cantilever pads which become flat are in contact with the shoulders and rub sore spots. Discard those which are worn and buy new ones. You may save money, but you lose valuable players and ball games. Don't use those poor pads on your scrubs either. They grow up to be first stringers and an early shoulder injury may ruin them for all time.

Question: Some of my best players are complaining about hip injuries. They wear blocking pads but still they show up with bruised hips. What is the trouble?

Answer: First, they should be of the proper size, so that they will remain in position and not shift around as your player moves. This movement will cause pinching of a nerve, and although it is painful, it will not turn out to be a crippling injury. It slows down your players as they always will favor an injured place and one slowed-down player throws the team off balance. These nerves are at the top of the hip bone, so be sure that spot is covered. We have our pads made with foam rubber instead of cotton paddings, as we find that the perspiration does not soak up as much and add weight to the pads. They last longer and this offsets the slight additional cost. The pads dry more quickly, if rubber is used. The best treatment for this pinched nerve injury is heat and massage with a good analgesic balm.

Question: What do you suggest to avoid scratched and bruised knees?

Answer: After several years of trying almost every kind of knee pad in our football pants, we hit upon the idea of using a foam rubber basketball knee pad and have done away with padding in the pants. We find that it stays in place, gives a measure of support to the knee and gives the players a feeling of confidence. When they put a knee to the ground they are sure that there will be some padding there and not have to take it on the bare flesh. This year we had fewer knee injuries of all kinds than ever before.

Question: Tell me something about thigh pads. My boys say they shift about too much and at some time fall out of the pockets.

Answer: Since the invention of the two-way stretch pants they hold the pads in place and prevent that shifting you mention. I consider this the best feature of the two-way stretch equipment. I might warn you about the way you handle the thigh pads in your equipment room. If you stack them on top of each other, the weight will flatten out the bottom ones and prevent even distribution of the blows they are supposed to take. When you find flat ones in stock, you had better throw them out and get new ones.

Question: How do you avoid sore feet and injured ankles at Texas A&M?

Answer: By seeing that each boy is fitted with the proper size and type of shoes, just as though he were walking into a shoe store and paying for them himself. We fit every boy to his right size, instead of handing him out the size he asks for. We have him in his full equipment when he is fitted so we can see how much the foot will spread under the added weight. We see that there is no free action, and still we do not allow any pinching. Those factors will slow down any player and at the same time ruin his arches. Take a freshman with a poor shoe fit, and by the time you carry him on in the same size to his senior year, he will be of no use to you. Shoes are expensive, so see that you fit them properly and they will last longer. While I am on shoes I'll pass on a few more tips. Make your boys lace their shoes clear to the top. We found some of the boys lacing them to within two eyelets from the top and then tying the laces. We also found these boys with rubbed feet and twisted ankles. Shoe manufacturers have made shoes to specifications of coaches and trainers, so why go against their judgment and let players wear them partly loose. You have lost much of the ankle support when you do not lace them to the top. You may as well buy a baseball type shoe, if you do not take advantage of what you have bought. Demand that your equipment supplier give you the best shoe laces he can get, and I don't mean rawhide ones. Don't let a boy splice up broken laces, but give him new ones. A complete change occasionally will keep the shoes snug on the feet. Some boys are too lazy to change shoe laces or cleats, so I suggest that you have one day a week, when you examine both and have replacements made where needed. In the interest of economy we have practice shoes and game shoes, but in each case both are fitted to the boy who is to wear them. Some of our backs will use up four or five pairs of shoes a year, but we never complain, for we know that worn shoes would cause injuries which might make the player valueless to us when we need him. Our game shoes are the same type as our practice shoes but are lighter in weight, especially those worn by our backs.

Announcements

Army and Navy Insignia

Posters showing the insignia of the Army and Navy may be secured by writing the Witchell Sheill Company, 1635 Augusta Blvd., Chicago.

Taping Films

Taping Technique a, 16 mm film—both sound and silent—is available for bookings. Trainers and coaches should address their requests to The Bike Web Company, 41 West 25th St., Chicago.

Handbook on Athletic Injuries

If you haven't secured your Handbook on Athletic Injuries, communicate at once by card or letter with The Denver Chemical Mfg. Co., 163 Varick Street, New York City.

Seal-O-San

If you have not received the 1942-1943 edition of Seal-O-San Basketball Coaches Digest, write for your copy at once. Play diagrams, illustrations, articles on offense, defense, and fundamentals are included in this attractive Digest. Address your request to Huntington Laboratories, Inc., Huntington, Indiana.

Basketball Ratings and Forecast

For information regarding the Dick Dunkel Basketball Rating and Forecast for the 1942-1943 season, write the Converse Rubber Company, Malden, Mass.

Footwork in Sports

The sixth of the Series on Footwork in Sports, the second in the Boxing Series, appears in this issue (page 17). Copies of this series and those on football and basketball may be secured by writing John T. Riddell, Inc., 1259 Wood Street, Chicago.

The Observer

Do you have your name on the Ivory System mailing list to receive the monthly issues of *The Observer*? Full of helpful suggestions on the care of athletic equipment, so very important these days. Write the Ivory System, Peabody, Mass.

Keds Sports Bulletin

The new Keds Sports Bulletin announced on page 5 of this issue is available without cost to coaches and student leaders. Quantities are limited because of war-time restrictions. Address Frank Leahy, Director Keds Sports Department, 1230 Sixth Avenue, New York City.

INDEX TO ADVERTISERS

Enroll Your School Today In The Nationwide Intramural Softball Tournaments.

●

Softball Is An Aid To Physical Fitness.

Attention

High School Coaches

The only High School Softball Championship Tournament carrying the official sanction of The Amateur Softball Association of America, is now conducted by the A.S.A.

THE AMATEUR SOFTBALL ASSOCIATION

is the sole governing body of amateur softball. It is an allied member of the A.A.U., and The United States of America Sports Federation (formerly The American Olympic Association). Other members of the Federation are The National Collegiate A.A., The Intercollegiate Association, and many other sports governing bodies. Enter your school's intramural

SOFTBALL TOURNAMENT

in one sanctioned and conducted by the Amateur Softball Association. BE SURE. Fill in, and clip the entry blank below, and mail today. Each school entering must have at least twelve teams in a bracket, but may conduct both a boys' and a girls' tournament.

COSTS YOUR HIGH SCHOOL NOTHING

but a three cent stamp and an envelope. Upon receipt of filled-in entry blank, the A.S.A. will mail you a set of tournament rules, and an especially prepared double elimination bracket. At the conclusion of the tournament, mail the bracket to the A.S.A. properly filled in with team names and scores. Ten gold plated on sterling silver A.S.A. softball medals, donated by THE COCA-COLA COMPANY, will be sent you for presentation to the winners.

ENTRY BLANK

Clip, fill in, and mail to The Amateur Softball Association

8438 South Yates Ave., Chicago, Ill.

PLEASE ENTER THE ..... HIGH SCHOOL

of (city) ..... (state) .....

in the A.S.A. sanctioned and conducted High School Softball Tournament. We expect to have ..... boy teams, ... girl teams.

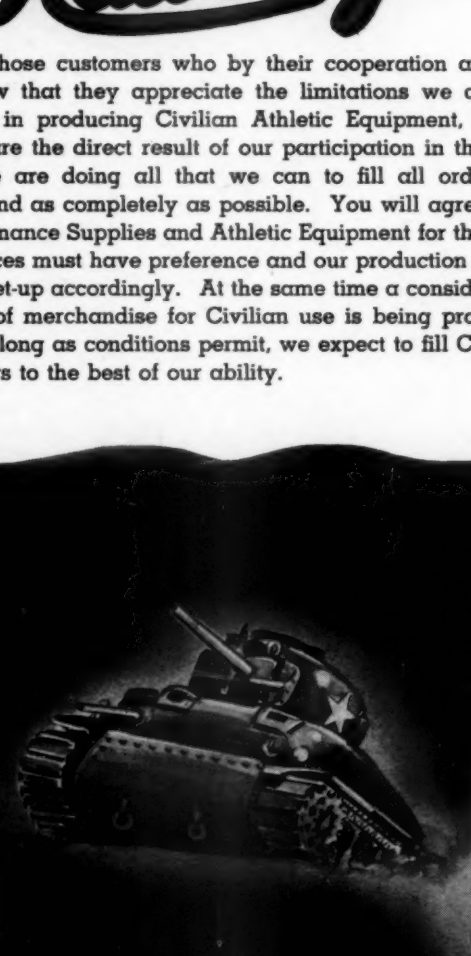
It is understood that this tournament may be entered at no cost to our school. The A.S.A. will forward tournament rules, brackets, and in addition ten gold plated on Sterling Silver A.S.A. championship medals which are donated to the A.S.A. by THE COCA-COLA COMPANY, as per above advertisement.

SIGNED ..... Coach

(Please print)

Rawlings

THANKS those customers who by their cooperation and patience show that they appreciate the limitations we are encountering in producing Civilian Athletic Equipment, limitations that are the direct result of our participation in the War effort. We are doing all that we can to fill all orders as promptly and as completely as possible. You will agree with us that Ordnance Supplies and Athletic Equipment for the U. S. Armed Forces must have preference and our production schedules are set-up accordingly. At the same time a considerable amount of merchandise for Civilian use is being produced and as long as conditions permit, we expect to fill Civilian orders to the best of our ability.



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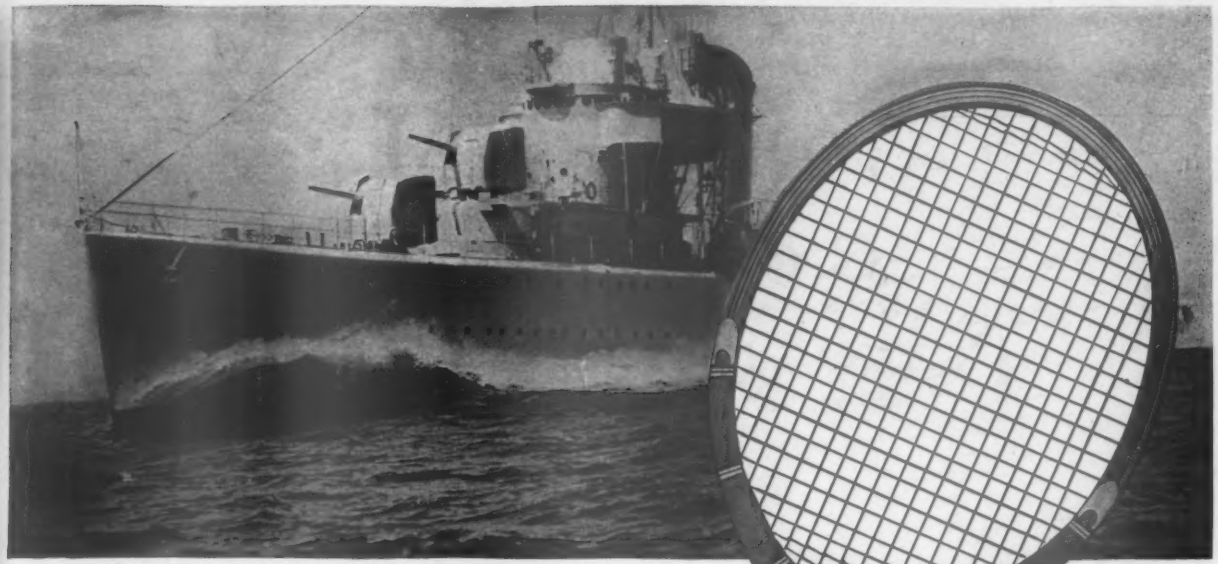
IT PAYS TO PLAY



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SPALDING

TENNIS EQUIPMENT

Spalding Sets the Pace in Sports

VOLUME XXIII

The ATHLETIC JOURNAL

NUMBER 8

CONTENTS

for April, 1943

PAGE

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Illustration 1 shows the legal position of the feet of the left-handed pitcher before the full wind-up. Both feet must be on the rubber, or one directly behind it. In this instance the left or pivot-foot is on the rubber and points towards the plate as does the kicking foot which is directly behind the rubber. The pitcher then kicks his right foot towards first base, pivoting at the same time and delivers the ball. A maximum of body leverage can be employed with this method of throwing. (The pivot shoe is under great strain here.)

Illustration 2 reveals a perfect follow-through position after delivery of the ball. Thus, the pitcher is "set" to step quickly in any direction to catch or knock down any hard hit batted balls coming his way. The fielding pitcher must have perfect position in order to help his team defensively.

The position of the right-handed pitcher with a man on first base is shown in Illustration 3. It goes without saying that a pitcher is as good as he is with men on base. Note the ball of the right foot rests on the rubber at an angle pointing towards the plate. The left foot also points towards the plate in a manner permitting the pitcher to half-face the hitter and the runner at the same time. The position allows for quick and effective throws to either the hitter or the man on first base.


In Illustration 4 the left-handed pitcher has assumed the "choked" position with a man on first base. Here again the primary thought is to be able to throw quickly and deceptively to the hitter or to first base. Note the right foot is on a line which is forty-five degrees from the line to the plate and the line to first base. In this manner, great deception may be effected, without distortion of a free delivery to either base.

Illustration 5 shows the stance of the catcher while giving the signals to the pitcher. Both feet are on a parallel line at right angles to the line of the pitch. In this instance the catcher merely sits on his heels which are about fifteen inches apart, toes straight ahead. Comfort and balance are essential in this position.

The catcher assumes his receiving position in Illustration 6. His feet are placed a trifle wider than shoulder width. Here again, comfort and balance are the determining factors. The left foot may be advanced some two inches to enable the catcher to throw more quickly. He must keep his feet well under him to permit a quick side-step to retrieve an inside or outside pitch and still remain in balance for a pivot to throw quickly and without effort. (The catcher in his crouching and moving for pitches and throws, puts a terrific strain on shoes.)



Illustration 7 shows the initial position, six inches in front of the base, assumed by the first baseman as he faces each infielder preparing to throw a runner out. Both feet are on a parallel line in a position to be shifted quickly to allow a tag with either one. This footwork may be used by any infielder on a force play and is especially adaptable for double plays when employed by the second base man.

In Illustration 8, the first baseman has extended himself to his right for a wide throw. Note the left toe on the edge of the base whereas the right foot reaches to cover the distance of the throw. The position of the feet is reversed for wide throws to the left. Either foot may anchor the tag when the throw is directly in front of the base.

SPORTS ARE CONTRIBUTING TUR

A RESOLUTION:

WHEREAS, we, the members of the Athletic Institute, Inc., are convinced that competitive, spectator and participant sports are contributing to the prosecution of victorious war, and

WHEREAS, we believe that intercollegiate and intramural sports in colleges and interscholastic and intramural sports in high schools give young men plus values in mental and physical fitness, and

WHEREAS, we believe that school and college sports always have contributed to the life of the student, the community and the nation and that they are needed now more than ever before, and

WHEREAS, we believe that it is patriotic for men and women engaged in war work and for business executives to engage in participant sports that will better condition them physically and provide them with a wholesome "change-of-pace," and

WHEREAS, we believe that spectator sports, such as college football and basketball, major league baseball, hockey, high school athletic contests, etc., are essential since they administer to the national morale, and

WHEREAS, there is indisputable authority that the American system of sports is superior to the former German turnverein system, which Germany, itself, abandoned to copy the American system,

THEREFORE, be it resolved, that we, members of the Athletic Institute, Inc., marshal our resources to present to the people of the nation the real values of sports in war time; that we fortify the public with facts and figures to protect them against minorities who would abolish sports even in peace times, and that we make these facts and figures available to federal government, military, state and local officials to guide them in consideration of the place of sports in war time.

TUR AMERICAN VICTORY DRIVE

OUR SERVICES:

The Athletic Institute, Inc., is providing the following services to acquaint the public with the value of sports in war time:

1. It is supporting the Industrial Recreation Association, whose function is to act as a clearing house for industrial management, war workers, personnel directors and recreation leaders in matters of wholesome leisure-time pursuits for "warrior-workers" on the home front.

2. It has twenty-six films of the motion picture, "Make the Most of Playtime," produced by the Athletic Institute, constantly in use.

3. It conducts a research bureau to compile authentic information concerning sports for guidance of school administrators, athletic directors, government officials, the press and other interested groups.

4. It has availed itself of public relations facilities to prepare news releases and editorials on facts established by the research bureau in the justification of war-time sports.

5. It stands ready to counsel with individuals and groups who are conscientiously striving to protect the American system of sports in war time against influences which would arbitrarily abolish sports that are contributing to an American victory.

THE ATHLETIC INSTITUTE, INC.
209 South State Street
Chicago

One of several obstacles on a Farragut half-mile toughening course.

Physical Fitness at Farragut

By Richard M. Bateman, Lieutenant (j.g.) U.S.N.R.
Adjutant, Training Department, United States Naval Training Station at Farragut, Idaho

HERE is an over-all view of the physical fitness program as used at one naval station. During the preceding issues, we have printed a detailed account of the various sports and conditioning exercises used at Great Lakes Naval Training Station and the pre-flight schools.—Editor's note.

BLUEJACKETS in the United States Navy must be strong physically, mentally alert and have a surplus of stamina and endurance.

Aboard ship every man has an assignment in battle—his battle station. The efficiency that he demonstrates in carrying out his assignment depends, to a large extent, upon his physical fitness. Every man is a vital factor in the success or failure of a fighting ship. Every fighting ship's efficiency can, to a great extent, be measured in terms of the physical fitness of the men who man her.

The Navy has long stressed physical fitness as an integral part of its program. As a result of the present conflict this part of the Navy program was re-emphasized in Paragraph 8 of General Order 122, "All commands afloat and ashore will immediately institute adequate and systematic exercises to bring personnel to peak of physical fitness.

An extensive and comprehensive physical fitness program has been made the basis of the training program for bluejackets at the new United States Naval Training Station, Farragut, Idaho, since its opening in September, 1942. Under the direct supervision of Commander E. F. May, Training Officer, and Lieutenant (j.g.) L. C. Avery, Physical Fitness Officer, "physical toughening" activities are a part of the daily routine of every Farragut bluejacket.

Under a station policy of "athletics for all" established by Captain I. C. Sowell, U.S.N., Commandant, and Captain J. G. Atkins, U.S.N., Executive Officer, a democratic program of station athletics has also been established at Farragut. This policy has opposed the establishing of a "sports aristocracy" which involves the development of expert skills in the few at the price of neglecting the many.

In democratizing its sports, Farragut has democratized its physical fitness. The commandant, in expressing his views in regard to the subject, stated "The United States Naval Training Station at Farragut is not interested in developing the expert skills of the specialist but is interested in developing every indivdual aboard from bluejacket to officer to his highest level of physical fitness."

The Farragut physical fitness program is built into the regular recruit training curriculum. The training time allotted to this activity is planned for, and used by, the physical fitness section of the training department.

Five regimental areas, each with a huge drill hall that is equipped with seven full size basketball courts, volleyball courts, and a swimming pool, 75 feet square, aid in developing an indoor program for inclement weather.

For outdoor activity each regiment is equipped with a large drill field or "grinder" that is also available for touch football, softball, relays and track activities.

Each regiment will also have in the near future a complete baseball field and equipment.

In addition to the above, each regimental area has access to a rigorous half mile physical hardening obstacle course constructed on hilly, rugged, forest land.

In carrying out the extensive recruit training program, the physical fitness officer is assisted by physical fitness instructors in each regiment. Each of these regimental officers has two chief specialists assisting him with the program. One of these supervises the swimming instruction in the regiment and the other supervises the other phases of the fitness program.

In addition to the regimental staffs, the physical fitness officer has two chief specialists who act as co-ordinators of the over-all station swimming and physical fitness instruction.

Each regiment consists of approximately forty companies of 120 men each. Each company has as its company commander, a chief specialist, who has had, as part of his original training, a basic course in physical fitness. In addition, most of these men have been physical education instructors and coaches before enlisting in the Navy. Their constructive criticisms, suggestions, and assistance in carrying out the overall program is invaluable.

Each company has an appointed recruit athletic and physical fitness manager to take care of the organizational details in his unit.

Farragut's physical fitness section has organized its program with certain aims and objectives in mind, each contributing to the final product—a mentally alert, physically fit bluejacket, complete with endurance and stamina.

During the first and last weeks that a bluejacket is in training at Farragut, he is required to take a physical condition rating test. These two tests are given under the supervision of the regimental physical fitness instructor and company commanders. The same test is used in both cases.

The test consists of four activities—chinning, broad jumping, push-ups and back levers, and they are given to the bluejackets in that order. Norms have been computed for each of the four activities in terms of rating points. The test score is based on the Navy standard of 4.00 or 400 points or above as excellent and 2.50 or 250 points as the lowest passing point total. Bluejackets scoring below 250 points are placed in corrective or remedial classes.

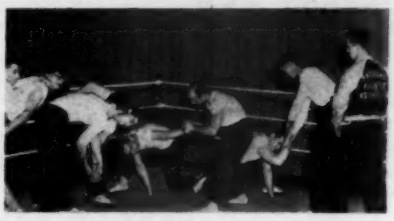
Names of men scoring below standard on the first test are submitted to their company commanders. It is their responsibility to see that these men report to the special classes on scheduled periods. Men who are found deficient in the physicall condition test are excused from part of their military drill periods for the special classes.

The following standards have been set

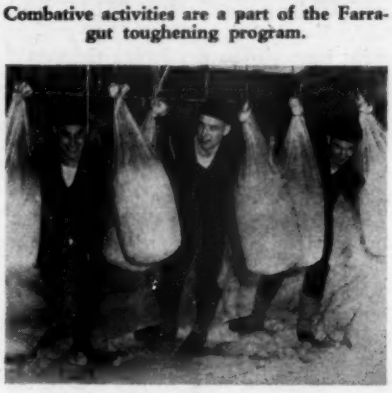
Boxing develops aggressiveness in Farragut bluejackets.

Mass boxing instruction is a feature of the Farragut physical fitness program.

Individual boxing instruction is given to all bluejackets participating in regimental and station tournaments and "Happy Hour" programs.



Combative activities are a part of the Farragut toughening program.



Hitting the sandbags on one of the Farragut half-mile obstacle toughening courses.

Basketball for physical toughening and recreation is a sport enjoyed by every Farragut bluejacket. There are forty-two indoor courts.

up for administering and standardizing the testing program:

A. CHINNING

1. Starting position:
   a. Bluejacket hangs at full length from the bar with a reverse grip and with the thumbs around the bar.
2. Proper execution of the exercise:
   a. The bluejacket raises the chin completely over the bar to a parallel position to the deck. The body is then lowered to the starting position before the following chins are begun.
   b. The legs shall be extended at all times perpendicular to the deck.
   c. No jerking, kipping, nor swaying will be tolerated.
   d. Violations of the rules shall result in the subtracting of that chin in which the violation occurs.

B. STANDING BROAD JUMP FOR DISTANCE

1. Starting Position:
   a. Both feet shall be parallel and the toes shall be slightly behind the take-off line.
2. Proper execution of the exercise:
   a. The take-off shall be made as the recruit thrusts the arms forward and both feet leave the ground together.
   b. Measurements will be recorded from the nearest point that any part of the jumper's body or clothing touches the deck.
   c. In case of "crow-hops" the jumper's distance will be taken from the point where the shoe left the deck.

C. PUSH-UPS FROM THE DECK

1. Starting Position:
   a. Bluejacket lies face downward with arms extended horizontally. The toes of the feet shall be placed against the deck. The arm then shall be drawn in under the chest with the fingers outstretched and the palms down.
2. Proper execution of the exercise:
   a. A complete push-up will be executed by the bluejacket when the body is raised completely off the deck by the extended arms. The body is then lowered to the deck by the flexing of the arms until the chest and chin touch the deck.
   b Violations that will result in a push-up not counting are: Failure to keep the back straight and rigid, resting on the deck, and any other movements which would facilitate execution of the exercise.

D. BACK LEVERS

1. Starting Position:
   a. The bluejacket will lie flat on his back on the deck with the fingers interlocked behind his neck. The feet will be anchored.
2. Proper execution of the exercise:
   a. The torso will be raised to a position where it is possible for the right elbow to touch the left thigh. The legs remain flat on the deck at all times. Exercise is completed when the torso is returned to starting position. The proper execution of this exercise will count as one body lever. On the second body lever the opposite elbow touches the opposite thigh. For example, the right elbow touches the left thigh and the left elbow touches the right thigh.
   b. No resting on the deck is permitted.

During the eighth week of the bluejacket's training he again takes the test to see how much improvement has taken place in his physical condition. The results for January, 1943 are indicated by the following:

Pre-Test (64 Companies) 7600 Recruits

1. Average number of deficients per company 63.77
2. Average bluejacket's score on pretest 238.6

Post-Test (64 Companies) Eight weeks after pre-test

1. Average number of deficients per company 22.83
2. Average bluejacket's score on posttest 289.79

Improvement noted

1. Average per cent of increase in efficiency 17.6
2. Per cent of decrease of deficients per company 64.2.

In addition to the physical condition test the bluejacket takes a swimming test during the first week of training. A strenuous effort is made at Farragut to improve the swimmers and teach the non-swimmers. Bluejackets are required to swim 75 yards for an A classification. Those swimming 50 yards receive a B classification. Only those receiving the A classification are considered as qualified. Non-swimmers are given special instruction during the evening recreation periods and

are expected to qualify at least for a B classification before graduation.

B qualifiers are required to put in extra time in the pools in preparation for an A classification.

In order to stimulate regimental swimming qualifications, the company in each regiment qualifying the most men at the end of five weeks of training is given a special shore liberty.

The effectiveness of the swimming program from the standpoint of instruction of non-swimmers can be pointed out by the following results for January 1943:

Number of companies taking test: 65.

Number of bluejackets taking test: 7659.

Number of bluejackets who could swim before entering the Navy: 5490 or 71.687 per cent.

Number of bluejackets who learned to swim at Farragut: 1615 or 21.09 per cent.

Number of bluejackets who failed to qualify for A or B classification: 554 or 7.23 per cent.

Number of bluejackets who qualified for A or B classification: 7105 or 92.77 per cent.

The swimming curriculum in the recruit training program is divided into six one-hour periods, distributed over the twelve weeks of training. This curriculum is organized as follows:

Period I.

A. Orientation (lecture)

1. Pool instructions.
   a. Bring soap, towel, and bathing trunks.
   b. Shower with warm water and use plenty of soap.
   c. Rinse body and put on bathing trunks.
   d. Use foot bath.
   e. Life guards check swimmers for cleanliness before they enter pool.
   f. After visiting the head take a warm water and soap shower before re-entering pool.
   g. For all spitting, blowing the nose and spouting water from the mouth, use the scum gutters along pool edges.
   h. Persons with colds, skin diseases, sores, discharges, infected cuts and bandages are forbidden in the pool.
2. Safety precautions.
   a. No running or skylarking on pool decks.
   b. No pushing or shoving of any kind.
   c. One person at a time on the diving boards.
   d. No excessive springing on the diving boards.
   e. Don't swim directly in front of the diving boards.
   f. Don't swim alone.

B. Qualifying swim test for all bluejackets over 75-yard course.

C. Practice jumps from 10-foot board with and without life jackets.

D. Instruction for non-swimmers during the qualifying swim and jumps.

E. Organization of non-swimmers for evening classes.

Period II.

A. Qualifying swim for non-swimmers and absentees.

B. Explanation, demonstration and participation in—a. floating; b. treading; c. sculling.

C. Instruction for non-swimmers.

D. Terminate period with short snappy relays.

Period III.

A. Qualifying swim for non-swimmers and absentees.

B. Lecture and demonstrate—swimming in the open sea.
   a. Types of dangerous sea animals.
   b. Swimming in oil and fire.
   c. Swimming underwater.
   d. Demonstrate use of clothing as temporary life preservers.
   e. Swimming with clothes on.

C. Lifesaving instruction and demonstration.
   a. Approaches.
   b. Breaks.
   c. Carries.
   d. Schaefer method of artificial respiration.

D. Terminate period with short snappy relays.

Period IV.

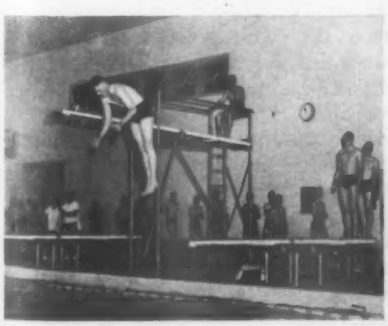
A. Qualifying swim for non-swimmers and absentees.

B. Lifesaving (land and water drills)
   a. Approaches.
   b. Breaks.
   c. Carries.

(Continued on page 32)

Every Farragut bluejacket is required to take a physical condition test. Chinning is one of the four parts of the strength test.

Farragut bluejackets finish their daily half-mile obstacle-course run with chinning exercises.



Qualifying swimming tests are given the Farragut bluejackets during the first week of training. Special instruction is given to all non-swimmers and those not meeting station requirements.

Abandon-ship drill with life jackets.

Instruction on how to make life preservers from articles of clothing is part of the Farragut swimming curriculum.

The ATHLETIC JOURNAL

Nation-Wide Amateur Athletics

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JOHN L. GRIFFITH, Editor

Shall It Be the American System of Physical Education or Military Training?

AT the Thirty-Sixth Annual Convention of the National Collegiate Athletic Association held in Detroit, Michigan, December 29-31, 1941, the following resolution was adopted by the Convention:

WHEREAS, the athletic programs of the nation's schools and colleges were recognized as having made inestimable contributions to the physical attainments and morale of the Armed Forces of the United States in the period of our last war; and

WHEREAS, the schools and colleges of the United States since 1919 have made consistent efforts and progress toward improvement of a situation which evidenced itself in a distressingly high ratio of rejections for active military service because of physical unfitness, during the period of our last war; and

WHEREAS, those efforts have taken concrete form in the record of American colleges, as they have instituted courses of professional training for physical education leaders so that a large corps of leaders in that field is now available; greatly broadened the scope of their health education, physical education and intramural and intercollegiate athletic programs, vastly expanded their plants, personnel and facilities to provide for the enlarged programs of physical education and athletic participation among the student bodies; and have provided also training in such invaluable supplementary activities as rifle shooting; and

WHEREAS, the vital importance of those efforts assumes renewed emphasis in the present crisis; now therefore

BE IT RESOLVED, by the National Collegiate Athletic Association, the American Football Coaches Association, and the College Physical Education Association, meeting in Detroit, Michigan, December 31, 1941,

THAT throughout the present emergency the programs of health education, physical education, recreation and competitive athletics in the American colleges be maintained, and, in every manner feasible, where not inconsistent with the demands of technical courses established as emergency measures, be expanded and intensified; and further

THAT the presidents and governing boards of the institutions of higher learning in the nation be requested and urged to provide facilities and necessary curricular adjustments to provide greater time for the development of physical fitness of the youth of those institutions; and further

THAT each institution be urged to make a complete survey as to its facilities and needs for physical education and to institute a minimum requirement of three hours per week of compulsory physical education for all students.

This resolution was presented to the National Conference of College and University Presidents of Higher Education and the War, held in Baltimore, Maryland, January 3 to 4, 1942, by President Thurston Davies.

On the whole the recommendation of the National Collegiate Athletic Association was not warmly received by the presidents who attended this convention in Baltimore. One president was reported as suggesting that, since the men who attended the National Collegiate Athletic Association convention in Detroit were partial to athletics, the resolution presented to the presidents by President Thurston Davies be tabled.

The conference of presidents, however, recommended that "all colleges and universities take such steps as will be necessary to bring each individual student to his highest possible level of physical fitness."

The Association of American Colleges met last November in Philadelphia. This meeting was attended by a large number of college and university presidents or their representatives. This association passed, among a number of other resolutions, the following:

"Because of the present transportation difficulties and other patent reasons, the Association of American Colleges would suggest that intramural athletic contests rather than intercollegiate games be the general rule for the duration of the war. A season might be concluded by a contest between two neighboring institutions."

From the reports of the two meetings referred to above, it is quite clear that not many college or university executives found time to say a few kind words about competitive athletics. In fact, one might be pardoned for assuming that the majority of the men who attended these two meetings hoped to use the war emergency as a means of getting rid of intercollegiate athletics.

Some time ago the War Department appointed a number of college presidents to comprise an advisory committee on curriculum for the Army specialized training program.

It was reported that the following presidents were chosen to represent this committee: Bowman of Hopkins, Doherty of Carnegie Tech, Morley of Haverford, Wilbur of Stanford, Tygert of Florida,

Father Gannon of Fordham, Dykstra of Wisconsin, Ford of the American Historical Association, and Hetzel of Pennsylvania State College.

It was further reported that this committee of prominent educators recommended to the army committee on curriculum for colleges that intercollegiate athletics be abandoned for the boys who will be sent to what may be called army universities and colleges.

We have felt ever since the last war that the educational institutions, meaning the grade schools, secondary schools and institutions of higher learning could, if they saw fit, so conduct their physical training programs as to improve the physical fitness of the young men of this country to a remarkable degree. We have also felt that, if the educators are not willing to recognize the values of such activities as to produce a physically fit citizenry, the military establishment will be forced to recommend universal military training for the boys of high-school age. If a law putting this into effect were enacted and if the boys of seventeen and eighteen or of eighteen and nineteen were sent for two years to camps for military training, then it is not hard to imagine that athletics and physical training generally would pretty much disappear in the public schools. There are some college presidents, especially Dr. Hutchins of the University of Chicago, who maintain that it is not the function of an educational institution to help to make the undergraduates physically fit.

This war, however, is teaching that, unless a people is strong, people may not endure. The question pretty much boils down to this, is it better for the schools to conduct a satisfactory physical training program for all of the students, thus leaving the boy in the home and presumably under the influence of the church and the school, or is it better to send him for two years to a military camp where a great deal of the time will be spent in building him up physically, so that he can give a good account of himself, if he is called upon to shoulder arms?

From the reports of the action taken by the college administrators at the meeting in Baltimore in December 1941, the presidents of those institutions which constitute the Association of American Colleges, and the university presidents who were appointed to advise the Army Curriculum Committee, a great many of our educators do not believe very strongly in competitive athletics, especially intercollegiate athletics.

There is only one basis on which this question should be discussed and at some time settled and that is this, what is the best for our country? If it is the best thing for our country that we have no physical training in the form of athletics in the schools and colleges and substitute for this work the military camp training, then of course that is the thing we should do. We believe, however, that the American system of education as we have known it, especially in that it included or at least tolerated competitive athletics, is better than the system that the French people followed prior to the defeat of France by the Germans. We do not say that France fell victim to the German oppressors, because her people did not have a well-established system of competitive sports in their schools, but we do believe that Germany and Japan have profited, so far as their fighting men are concerned, because an emphasis was placed on outdoor sports and physical training of all kinds in those nations some twenty years ago. We believe also, that our boys who are fighting on the different fronts are doing a splendid job, partly because of the American physical training and athletic system which has benefited all of these boys directly or indirectly.

College and High School Athletics Since Pearl Harbor

LAST summer when so many of the boys were leaving college and high school athletics to enter one of the services, a great many of us thought that the 1942 standard of football would be inferior to that of preceding years. This was natural, because the athletes are among the first to get into the fight when the country goes to war and this is the way it should be. With so many of the star athletes leaving, however, we were justified in wondering if the competition in football last fall would be all that we desired. We now have an answer to that question, at least in certain districts. Mention will be made of the Big Ten Conference football, because the statistics from that organization are available. They show the following, first, that the attendance as measured by gate receipts was not far off from the attendance and gate receipts the year before. This, of course, indicated a continued interest in college football, even though many of our people are busily engaged in war work.

Further, while this is not subject to proof, the athletic men in the conference agree that the quality of football played by the undergraduates in September, October and November of 1942 was of as high an order as the quality of football played in any preceding year. What is true of the Big Ten Conference is undoubtedly true of other conferences in the United States.

As regards basketball, the usual number of teams apparently have competed in the high school tournaments. It is reported that more people attended the state tournament games held at the University of Illinois this year than ever attended similar games in other years. Similar reports have come in from other state tournaments.

Saturday night, March 27, a basketball game between representatives of the Chicago public schools and the parochial schools was held in the Chicago stadium. This high school game attracted a crowd of 21,472 people. It was reported that at least two-thirds of the spectators were high school boys and girls. This game is significant because there were some who said the high schools should call off their games because of the transportation situation. It may safely be presumed that the great majority of these high school boys and girls who attended this game between Marshall and Mt. Carmel either walked or rode the street cars to the stadium.

In both colleges and high schools the grade of basketball was apparently as good as usual.

As regards track, as many boys as usual entered the Illinois Tech Relays held at the University of Chicago in March and the entry list for the Chicago Daily News Relay Meet was indeed very satisfactory. Fourteen thousand people attended these games. Purdue University held a relay meet which was conducted with a large entry list and satisfactory results as viewed from every standpoint.

The National Collegiate Athletic Association Boxing Tournament, held at the University of Wisconsin, was a huge success. Forty boys, the pick of the boxers of the colleges of America, competed in this meet. Every fight the final night was closely contested. The standard of sportsmanship was exceptionally high and something like ten thousand people attended the meet.

We might also mention the National Collegiate Athletic Association Swimming Meet held under the auspices of Ohio State University at Columbus on March 26 and 27. While some of the great swimmers of other years were not in this meet, there were still champions in evidence, records were broken, a large number of boys competed and the meet was a huge success.

Where do we go from here? Nobody, of course, knows how many able-bodied boys and young men will be enrolled in the schools and colleges next fall or next winter. Many pessimistic reports have been given out regarding the lack of athletes, but it may be that the pessimism of the day will not be any more justified than the pessimism of those who predicted last year that there would be no more football for the duration, and of those who wanted to call off track, swimming, boxing and other sports because there were not any boys to run, hurdle, swim and box.

It is easy to quit, but it is hard to finish a quarter-mile race. It is easy to quit in the matter of conducting intercollegiate and interscholastic athletics, but if the men who are at the head of these activities have as much fight as the boys who finish their races and play their games out to the limit, there will be fewer institutions giving up sports for the duration.

Intercollegiate and Interscholastic Athletics

IN these days when the question regarding the value of our intercollegiate sports, especially school and college football, is being raised, it is essential that we remember the things for which football stands.

The thought that we have in mind was very well expressed by Arch Ward, Sports Editor of the Chicago Daily Tribune, Thursday, August 28, 1941, which is quoted herewith.

The United States is in the midst of a great armament program. Hundreds of thousands of young men are in the army camps hardening themselves for a defense of their country. The accent is on virility. Maybe the importance of football and other contact sports is appreciated more than ever before. Football began to enjoy its greatest prosperity shortly after the last world war. That was the era which gave us Rockne, the Four Horsemen, and Red Grange. We came out of the war hardened in spirit. We recognized the things for which football stands. It wasn't long, however, until America became rich and fat and soft and some of our educators, to say nothing of our newspaper and magazine writers, began to worry because the strongest of our young collegians were spending a couple hours each day during the fall months blocking and tackling and playing a rough sport like football. Soon, certain college executives could find no place for football in the curriculum of education. Others began to spread the gospel of the softer life, the five day week, the six hour day. We probably would not have awakened so swiftly from our Utopian dream, were it not for recent events in Europe. But we have awakened and we are beginning to take stock.

Post-War High School Athletics

WITH a war won on terms of unconditional surrender, the winner must be responsible for leadership in rehabilitation at home and abroad. No nation can aspire to real leadership nor retain the respect of those who follow, unless the health and physical welfare of its young people are given a high priority rating in its post-war plans. Properly conducted and regulated high school physical fitness programs insure training of great numbers of students through many exercises and contests of an intramural or individual character motivated and made alive by a few of an interscholastic character. Without the latter, the former is a candle with no flame at the tip and as insipid as root-beer without carbonation.

National leaders in education and social welfare are going to insist on continued and expanded attention to the directed physical development of high school students, and communities are going to be generous in the appropriating of school funds for such programs. In the past, the schools have depended on admission charges to defray much of the cost and there has been much talk, some of it founded on fact, about a school running interference while the step-child gymnasium or athletic staff carries the ball. The war has brought a new evaluation of essentials. When properly used, the physical training plant is a blood brother of all other good departments of the school. The whole physical fitness program, including reasonable interscholastic contests, are being viewed as an activity which is a part of, rather than apart from the school.

High school sports will be at flood tide after the war because they popularize physical strength, coordination and quick reaction, and because they supply a fine opportunity for a war-tired generation to feel pride in the growth and welfare of the younger generation. There is, and always will be, such pride and interest. Otherwise, why are wars waged?

H. V. PORTER
Secretary-Treasurer, National Federation of High School Athletic Associations.

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Human Engineering Through Industrial Recreation

By Floyd R. Eastwood

Purdue University, Lafayette, Indiana
President, Industrial Recreation Association

THIS article, the conclusion of Dr. Eastwood's discussion of Industrial Recreation, begun in the March issue, is of special interest to the many former coaches of the high schools and colleges who have been called to serve as recreation directors in war-time plants.—*Editor's Note.*

Facilities

In companies having fewer than 2,500 employees, recreation facilities furnished by tax-supported agencies are used to a great extent. Companies employing a greater number of workers have established employee recreation centers which contain the needed space for conducting a program.

There are three major factors which should govern the expenditures for facilities. First, the location of the plant, as related to tax-supported or community facilities, should govern the extent to which the facilities should be furnished by the recreation association. For example, in communities where commercial recreation is expensive and public recreation facilities are inadequate or overcrowded, the needed facilities should be furnished by the recreation association.

The second factor to be considered is the distribution of the company's employees within the community. When the employees tend to segregate themselves within the community and public facilities are inadequate for employee needs, the recreation association should attempt to furnish the necessary facilities.

Third, if the recreation association hopes to have a financially self-sustained program, it should provide the facilities and activities which produce revenue, such as bowling, dancing, basketball, and concessions.

Program of Activities

The results of a recent study revealed that physical activities within industrial recreation programs have been engaged in more extensively than other forms of activity.[14] A re-analysis of these activity programs as related to size of company shows similar results. See accompanying table.

Sports in general tend to create strong group spirit whether the individuals are participants or spectators. Thus, industrial teams representing departments within an industry or meeting outside companies enjoy the support of the majority of the employees.

Physical condition of our armed forces is readily associated with the present defense program. Nevertheless, one seldom considers the contribution of the physical activities, sponsored by industrial recreation associations, to employee physical fitness equally essential to defense production. It would not seem advisable for these activities to be curtailed. In fact, during the present emergency greater emphasis should be placed upon this phase of the program for the younger employees.

The organization of social, cultural, and outing recreation offers greater problems than do the physical activities. The most popular physical activities are usually competitively organized. Organization has been by departments or other arbitrary units. In contrast, participants in social, cultural, and outing activities generally represent a cross section of departments or divisions within a company. Then too, these groups seldom receive the "spectator" support of other employees as do the competitive sports. Inasmuch as many employees desire these activities, yet generally represent a distinct minority within a department, these activities should be organized into clubs which disregard departmental lines. The desire for these activities should be ascertained frequently by using recreation "interest finders." The survey results should keep the recreation administrator abreast of the contemporary needs of the employees. This allows for program extension and reorganization.

Suggested Financial Policies

It is fundamental in the financing of an industrial recreation program that companies, with five hundred, or fewer employees, probably should combine and form a municipal industrial recreation association. A full-time director could then be engaged by these companies to administer the combined program and assist in establishing employee recreation associations in each of the companies. These companies could then carry on non-competitive recreation activities (handicraft, sewing, etc.) under interested volunteer leadership. Competitive programs could be guided by the recreational director and carried on both within the plant and between the plants through co-operative action of the elected representatives from the various companies and the recreational director.

In companies having between five hundred and twenty-five hundred employees a separate recreation program should be established, or companies of this size might establish a separate program supervised by a part-time director of recreation who would also be a part-time personnel officer. Companies having twenty-five hundred or more employees will, no doubt, need a fully developed industrial recreation program under full-time professionally trained leadership.

Regardless of whether a municipal industrial recreation association or an in-

(Continued on page 31)

TABLE I

Program Content

Physical	*Physical* (cont'd)	*Outing*	*Social*	*Cultural*
Archery	Ping-Pong	Camping	Banquets	Art
Badminton	Rifle-Pistol	Fishing	Bingo Parties	Camera Club
Baseball	Roller Skating	Hiking	Card Parties	Crafts
Billiards	Soccer	Hunting	Dancing	Debate Club
Bowling	Softball	Picnics	Social Parties	Gardening
Basketball	Swimming	Nature Study	Smokers	Dramatics
Boxing	Tennis	Riding	Teas	Library Club
Deck tennis	Track	Skating		Music
Football	Volleyball	Skeet Shooting		Science Club
Golf	Wrestling	Skiing		Singing
Handball		Tobogganing		Stamp Club
Horseshoes				

[14] Diehl and Eastwood, op. cit., p. 39.

Getting set for service

● A tricky serve. A forehand smash. This lad knows 'em all, coach . . . and there's plenty of reason why. A natural athlete to begin with . . . training under his tennis coach and years of valuable experience in competitive sports have made him a tough man to beat. A good thing for him . . . and for America, too.

It's going to take lots more young men like this lad to smash the roughest competition our country ever had. It's going to take fellows who are strong and alert. Fellows who have learned well the lesson you taught: How to act quickly and smartly under pressure. Whatever branch of the service these kind of fellows are in, they'll be better men because of the patient, competent training of you and brother coaches everywhere. That training will help speed final victory . . . their early return home.

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Developing Quarter Milers

By William P. Mahoney, Ensign, U.S.N.R.
United States Navy Pre-Flight School, Del Monte, California
Formerly, Track Coach, University of Notre Dame

IF any race in track requires a spread of talent, that race is the quarter mile. There was never a great quarter miler who did not possess the ability to think quickly. There was never a great one who did not possess aggressiveness to a degree greater than most of his team mates. And finally, there was never an outstanding performer at this distance who did not possess both speed and endurance.

This statement should not alarm the hopeful beginner. It has always been good technique, in inspiring the young to achievement in various athletic fields, to picture the best standards, so that they can improve indefinitely and attain a high development. That is all that I was doing in setting out those qualities.

Naturally, one rarely finds the above-mentioned attributes in a single person. One quite often finds a fine athlete who is slightly deficient in some of them. Happily, and this must be emphasized, most of these attributes can be developed with hard work and plenty of interest.

Let us begin, then, by delineating some of the qualities which should be stressed, both for indicating a natural ability for the event and in the way of setting goals for achievement. As to the size of the quarter miler, we bump into the diverse experience of coaches in this field. It forbids dogmatic classification. Generally speaking, though, a quarter miler should be a fairly tall person. The taller, the better, up to, say, 6′ 3″. A man six feet tall, weighing 175 pounds, would be ideal from this standpoint alone. Other considerations, including speed, natural strength, and other qualities, however, may make him more or less desirable. The necessary thing to do in approaching fitness for the event is to keep in mind the fact that all of the above specifications are purely relative, depending on other attributes.

Relative Stockiness Desirable

Besides good height and relatively long legs, a fine quarter miler must have more body weight, more solidity, and relative stockiness, than other performers in track. I recall a remark a veteran track coach made on seeing for the first time a boy, who looked for all the world like a great prospect, as he stepped on the track. It was to the effect that the boy's relative slenderness would probably prevent him from reaching the top of the field. That prophecy came true. There are two reasons why an ideal quarter miler should possess weight: The quarter mile requires more actual strength output than almost any other event on the athletic program; and it takes a fairly heavy person to handle himself well around curves and in big fields at high speed.

Comparatively heavy weight and good height, then, are the main bodily attributes which set off the "build" of a quarter miler from that of another track man.

Necessity for Speed

The next desirable natural quality in the order of importance is speed. Track coaches are not exaggerating when they call this event a sprint race. It is just that, except that it possesses qualities which relate it to distance running. Sprint it is, and this means that we must look for a boy who is, at least, an average sprinter in his own league. What great talent he does not have in this department can either be developed, or atoned for, by superior development in another phase of the race.

A brief mention of the pace that must be maintained for a respectable high school performance in the quarter mile will clarify the speed angle. In setting a pace for a fifty-two second quarter, the runner should make the first 220 yards in from twenty-four to twenty-five seconds. A good high school sprinter can handle this kind of pace very comfortably and still maintain the ease and floating style which will be mentioned subsequently. A performer not so speedy will have to labor at that pace, with a consequent sacrifice of running ease and fine over-all performance. It is perhaps discouraging to point out, at this juncture, that fine collegiate performers reel off the first two-twenty in the neighborhood of twenty-two seconds flat.

Last of the physical requirements to be sought in potential quarter milers is that of strength and endurance. This quality is partially bound up in the athlete's physique; a heavier boy usually possesses a greater degree of strength. A very large part of this quality is developed by long periods of jogging, sprinting, and modified distance work. If the problem of running the race were identical with that of short sprints, one would never have to worry about endurance. The familiar sight, however, of the quarter miler who leads a fast field up to the four-hundred yard mark and then fails, is proof enough of the statement that a fair share of endurance is part of a good quarter miler's equipment.

Peculiar Mental Characteristics

Next, we have to deal with the mental aspects. We can touch on them very briefly. The two mental qualities desirable in the quarter miler are those of cool thinking and aggressiveness. The intense and fluent nature of the race obviously gives rise to the necessity of possessing a clear head and a strong, fighting attitude. The fields are large and shifting, thereby calling for an athlete who, like a fine fighter, can adapt his tricks and power to any situation, even though it is one arising during the race and calling for a split-second decision. For example, there may be only a second or two to decide at what point he should jump into the lead, or pass, or float.

In addition, the very nature of the race itself, involving a group of men fighting hotly for position on turns, for the lead, and for other advantageous conditions, invariably ends up with a sifting of the wheat from the chaff; in this case, the aggressive from the backward. The quarter is no place for a mild character.

That just about sums up the physical and mental properties, one likes to see in a quarter miler. They are not always found in all performers, nor is that necessary, but a fair share of them is almost a *sine qua non* for fine performances. We may pass on, then, to the fundamental problem involved in running the quarter, namely pace.

Quarter Is Pace Event

From the point of view of pace, there are two ways of running the quarter mile. Some men prefer to burn up the track in the first two or three hundred yards, building up a big lead, and then pray that they make the finish tape in decent form. Others approach the quarter as they would a distance race. They schedule a comparatively easy first two-twenty and drive down the last one hundred yards in a strong, overtaking sprint.

Both methods may be used to advantage, but the first should be limited to athletes who are exceptionally fast and who are confronted by a large field. A man can sprint at top speed only so far, and pratically no one has ever succeeded in going a whole quarter of a mile at that rate. I will elaborate upon, and explain, then, the second type of schedule, the even-paced type, which seems to bring the more consistent results.

The key to the rate at which a quarter should be run may be summarized by the following axiom: One should run as fast as one can and still maintain a relaxed, floating effort. This axiom practically die-

SPOTBILT *Continues*

The Roster of Coaches in Service

★ ADAMS, JOHN HAROLD, Lieut., Navy.
Football Coach, Kansas State College.

★ ALLEN, GEORGE E., Lieut. (j.g.), Navy.
Basketball Coach, Brown University.

★ ANDERSON, EDWARD N., Major, Army Medical Corps.
Football Coach, University of Iowa.

★ BAER, JACK, Ensign, Navy.
Basketball Coach, University of Oklahoma.

★ BASKIN, WEEMS, Lieut., Navy.
Track Coach, University of Mississippi.

★ BEATTY, HAROLD J., Lieut. (j.g.), Navy.
Basketball Coach, Fresno State College.

★ BRANNON, BUSTER, Lieut., Navy.
Basketball Coach, Rice Institute.

★ BREEN, JOHN, Lieut. (j.g.), Navy.
Football Coach, Carroll College.

★ BROWNE, W. H., Lieut. Col., Army.
Basketball Coach, University of Nebraska.

★ BRUNSON, EMMETT, Lieut., Navy.
Track Coach, Rice Institute.

★ CALLAND, LEO B., Lieut. Comdr., Navy.
Football Coach, San Diego State College.

★ CAPPON, FRANKLIN C., Lieut., Navy.
Basketball Coach, Princeton University.

★ CASSELL, STAFFORD, Lieut., Navy.
Football Coach, Morningside College.

★ DAHLBERG, GEORGE, Lieut., Army.
Basketball Coach, State University of Montana.

★ DOUGLAS, BEN, Lieut. (j.g.), Navy.
Football Coach, Grinnell College.

★ DREW, H. D., Lieut. Comdr., Navy.
Football and Track Coach, University of Alabama.

★ FESSENDEN, DOUGLAS A., Captain, Army Air Forces.
Football Coach, State University of Montana.

★ GALLAGHER, C. J., Captain, Army.
Track Coach, Lafayette College.

★ GIEGENGACK, R. F., Lieut., Navy.
Track Coach, Fordham University.

★ GRAY, JACK, Lieut. (j.g.), Navy.
Basketball Coach, University of Texas.

★ HAYES, FRANK L., Major, Army Air Forces.
Football Coach, Marietta College.

★ HENDERSON, WILLIAM, 2nd Lieut., Army Air Forces.
Basketball Coach, Baylor University.

★ HINSON, RANDY, Captain, Army.
Baseball Coach, Clemson College.

★ HUMPHREYS, ALBERT E., Lieut., Navy.
Football Coach, Bucknell University.

★ INGWERSEN, BURTON, Lieut. Comdr., Navy.
Asst. Football Coach, Northwestern University.

★ KETCHUM, ELLISON, Lieut. (j.g.), Navy.
Football Coach, University of Denver.

★ KIMBALL, EDWIN R., Lieut., Navy.
Athletic Director, Brigham Young University.

★ KIMBROUGH, FRANK, Lieut., Navy.
Football Coach, Baylor University.

★ McLAUGHRY, D. O., Major, Marines.
Football Coach, Dartmouth College.

★ MUNDORFF, ROY, Lieut. Comdr., Navy.
Basketball Coach, Georgia Tech.

★ MYERS, DENNIS E., Lieut., Navy.
Football Coach, Boston College.

★ OLSON, CARL, Lieut. Comdr., Navy.
Track Coach, University of Pittsburgh.

★ ROSE, GLEN, 1st Lieut., Army.
Basketball Coach, University of Arkansas.

★ ROUNDY, E. C., Captain, Army.
Basketball & Baseball Coach, Colby College.

★ ROWLAND, JOHN H., Lieut., Navy.
Athletic Director & Football Coach, The Citadel.

★ SAUER, GEORGE H., Lieut. (j.g.), Navy.
Football Coach, University of New Hampshire.

★ SHAY, GEORGE D., Lieut. (j.g.), Navy.
Basketball Coach, Bowdoin College.

★ SIKES, J. V., Lieut., Navy.
Baseball Coach, University of Georgia.

★ STEVENS, MAL, Lieut. Comdr., Navy.
Football Coach, New York University.

★ STROMGREN, GEORGE A., Lieut. (j.g.), Navy.
Basketball Coach, California Aggies.

★ TAYLOR, THOMAS W., Captain, Army.
Director of Athletics, Brown University.

★ TOWNS, FORREST, Captain, Army.
Track Coach, University of Georgia.

★ VAN DE GRAAFF, W. T., Major, Army.
Football Coach, Colorado College.

★ WALTON, W. I., Lieut., Navy.
Director of Athletics, Ouachita College.

★ WELLS, LINN S., Lieut., Navy.
Baseball Coach, Bowdoin College.

★ WINKELMAN, BEN, Captain, Army Air Forces.
Football Coach, San Jose State College.

This roster represents a partial list of coaches now in the service. The first of this list appeared in the January, 1943, issue. Additional names will be printed in subsequent issues. Witchell-Sheill Company, 1635 Augusta Boulevard, Chicago.

tates the pace to be undertaken. If a man goes out any faster, he will tie up before he hits the tape. If he goes out more slowly, he will give away valuable yards to a man who can run at this fast, floating pace and still finish strong.

Analyzing Pace

Now it is commonly known that the first two-twenty of the quarter, which is the standard division of the race for pace purposes, is run faster than the second. Experience has shown further that the first two-twenty should be run from two to three seconds faster than the second. This automatically excludes the possibility of running the quarter at a completely steady pace, or at a slow-fast tempo.

With these rules at hand, let us plot a schedule for, say, a 52-second high school quarter miler. He should pass the two-twenty point in from twenty-four to twenty-five seconds. This will leave him a second two-twenty of twenty-eight to twenty-seven seconds. The happy feature of this method is that a boy capable of running fifty-two seconds usually can handle a twenty-four or twenty-five second two-twenty very comfortably and have the assurance all the way along that he has something left for the finish.

A slight variation in the rate of the first two-twenty is permissible and is suggested where a boy has peculiar ability, such as exceptional speed, or comparatively moderate speed but great strength. In the former case, it is obvious that he should be encouraged to work on a faster first two-twenty, and therefore, on a pattern which produces a greater difference between the time of each half of the race. In the latter situation, a good strong boy would be hurt by such a suggestion. He should be content to run the first half of his race in the comparatively slow time of twenty-five seconds. He should follow a pattern which provides small difference between the times of his two-twenties.

The general pace rule, however, still applies, despite these refinements. A quarter cannot be successfully run at a wild, sprinting rate, nor can it be run successfully by a boy who consistently stays back in the pack and expects to win with a strong finish, such as is common in high school distance running. The rules prescribed are the only safe ones and a close adherence to them will produce results.

We now pass to a consideration of the workouts which should be followed.

A Work Schedule

A most acceptable pattern of work prescribed by track coaches for quarter milers involves three phases: over-distance, sprint, and pace work. I am speaking now of the work in season. All of this should be preceded by several months of long distance jogging and running, preferably with a cross-country team, if the athlete has the good fortune to be around such an organization. It is in such preliminary work that the basic strength, so essential to a strong finish, is developed.

The standard over-distance workout for the quarter mile is 660 yards. A good high school quarter miler should negotiate this distance in about one minute, thirty-two seconds. More than just endurance will be developed with this workout. Great emphasis can be laid upon style and finishing strength without too much drain on the athlete's store of energy. For example, the coach can urge him to slow down the first quarter to, say, sixty-five seconds, and then to bring the pace back up the last 220 yards with a long kick. This will give the boy confidence in his finishing ability and also in the physical virtue of being able to call for more speed when he is comparatively exhausted. It will be advantageous to mix this over-distance workout with occasional stabs at 500 yards. Many coaches prefer the latter distance, because the pace in it is more like that of the quarter mile, whereas the 660 pace resembles a half-mile effort. Such over-distance work should be taken on Monday, when it would be dangerous to try anything faster.

Too much emphasis cannot be laid upon the necessity for sprinting ability, for, as was said before, this race is primarily a sprint. For that reason, it is suggested that Tuesday's workout, or Wednesday's, or both, be devoted to speed work. One way to make sure that the quarter miler remains speed conscious is to run him with the sprinters on those days. The only limit is the chance of injury, which is very slight in the middle of the week. Any distance, from sixty yards to three hundred, with a healthy mixture of racing starts, can form the nucleus of the quarter miler's sprint work.

Wednesday, or if speed work is the order of that day, then Thursday, is the time to get the boy's pace problems settled. It is particularly consoling to a quarter miler, or any other pace runner for that matter, to hit off a fraction of his competitive distance right on schedule on the Thursday before the big meet. The fractional distances used for pace work in the longer runs provide the units for the quarter, chiefly 220s and 330s. A regular schedule should be determined beforehand, and the schedule should be followed on pace day. If the boy hopes to hit about a 24-second two-twenty during the race, he should turn up two or three of these on Wednesday or Thursday. A 330 at that particular pace can be substituted. It should be pointed out at this time, however, that Thursday's workout should be relatively light.

I mentioned that all of the regular work for quarter milers should be preceded by a long period of over-distance work. If a cross-country season has not been used, then at least six weeks of jogging and calisthenics, plus occasional sprinting, should be indulged in, before this regular work is undertaken. Otherwise, injury may riddle the quarter-mile squad.

Some coaches prefer to emphasize the sprinting phase of quarter-mile work, instead of the balanced over-distance, under-distance pattern suggested. Emphasis on sprinting produces results when one is handling finished runners. But for the purpose of development, and that includes all athletes up to collegiate champions, I would recommend this well-rounded program which takes for granted no phase of the equipment necessary for quarter-mile running.

A Quarter Miler's Style

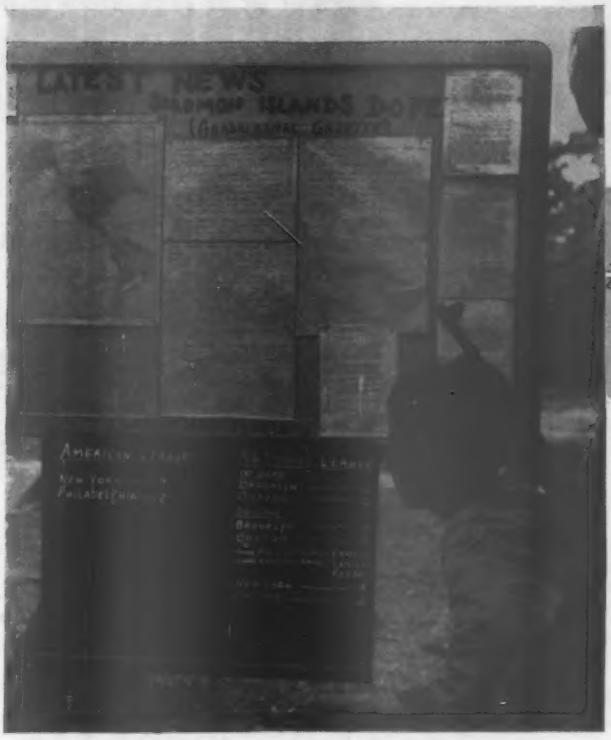
Now for the problem of running form. The desirable style is suggested by the phrase, "a fast, floating style," or even better by this hardly grammatical, but nevertheless effective statement: Run as fast as you can, as relaxed as you can. In so many words, the quarter style is very much like that of a short sprinter. The boy stays high on his toes and employs a rather vigorous, though natural, swinging of the arms. It differs in that the hips and shoulders must be kept looser. In fact, there must be a loose thrust of the hips, which not only suggests relaxation but results in the all-important lengthy stride. This emphasis on a long, effortless, yet driving, stride sets off the quarter miler's style from that of the dash man.

If the "budding quarter" miler does not create the picture of relaxation at his particular pace, whether it be a 26-second first 220, or a 23-second one, there is something radically wrong with his style. If he shows the least tendency for tightness, then steps should be taken to change him. One method is to loosen his fingers, which in turn relaxes the shoulders and hips. Another is to have him copy the floating action of another boy who has succeeded in catching the style. Aside from the quality of mixing speed with effortlessness, the quarter miler's method of running is almost identical with that of a sprinter's.

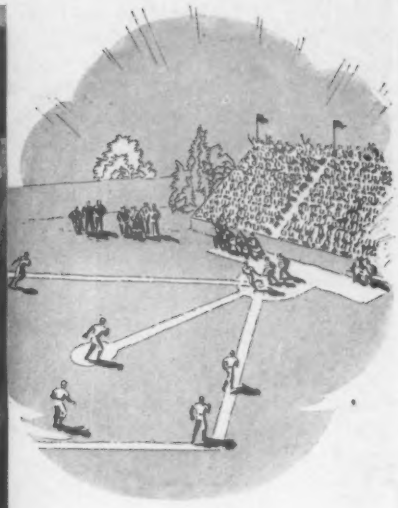
Strategy

I would like to close with some running hints. They will be stated briefly because almost all of them are common knowledge. The first, and, in my mind, the most important, is this: The quarter miler must start out of his holes as though he were running the 100-yard dash, and maintain that fighting, aggressive pace up to the 60- or 80-yard mark. Now this seems like a very obvious suggestion, but it is one too often neglected even by collegiate competitors. There are two tremendous advantages to be gained: It usually enables the man to pick his spot in the field, and

(Continued on page 51)



Courtesy U. S. Marine Corps



Somewhere in the Solomons this photograph of a U. S. Marine was taken. The top part of the Bulletin Board is devoted to the war job. The blackboard at the bottom is a piece of America—a chunk of home—the baseball scores.

BASEBALL

is a "Home Tie" for thousands of our boys

and with all its present troubles, it is still "The Great American Game"

Next to mail from home, what is it our fighting fellows in the Solomons and North Africa—and our boys stationed at lonely posts, throughout the world, long for most? It's the latest baseball scores. For baseball means home to these Americans wherever they are.

Baseball *is* America. It's the American worker on Sunday afternoon—millions strong. It's the office man on Saturday and Sunday. It's the business man any afternoon. And it's millions of American boys in our lots—in school fields and our baseball parks. To Americans in all walks of life and in all parts of our big war job, baseball is exactly what they need "to give them the recreation, the diversion, the relaxation they must have to keep them fit for the job."

Baseball *is* America. Without it we would be less the fighting nation we are, at the front, on the production lines and in our homes.

Promote baseball all you can. And for available quality-equipment, depend upon Wilson Sporting Goods Co., Chicago, New York and other leading cities.

BASEBALL IS AMERICA

It's Wilson Today in Sports Equipment

Wilson

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THIRTY-FOU
RAKE

Friday, April 23

WELCOME ES

Drake University and the Drake Re ittee ex
athletes and coaches of the unive ges and
to attend the thirty-fourth annual ys.

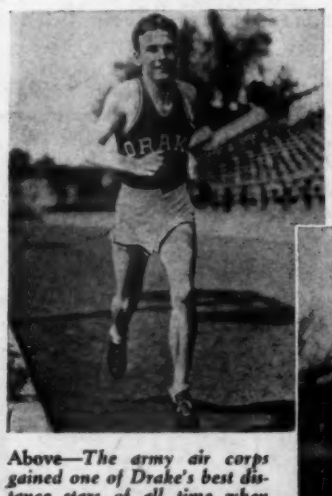
The Relays will be held Apri . Athle
leading universities and coll wa hig
pete.

The eyes of the athletic wo d towa
Relays. Preeminent am letic eve
the Relays this year ta signifi
of the inclusion of eve e men.

Founder
John L. Griffith

Director
M. E. [Bill] Easton

DAVE GRIFFITH



Above—The army air corps gained one of Drake's best distance stars of all time when diminutive Capt. Dave Griffith departed for Jefferson Barracks. Davy was Missouri Valley Conference two-mile champ and co-holder of the Drake indoor record.

Below—New Captain of the Drake track team is Bill Roberts, middle distance star. He was conference champion in the one-mile run in 1941.

CAPT. BILL ROBERTS

Welcome— Welco
to Des Moin ake R

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Progra Eve

Special Even llege Se

100-Yd. Dash, 12 Relay, O
High Hurdles, Shot int Medley
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440-Yd. Relay, 88
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Two-Mile Relay 880-Yd. R
Four-Mile Relay. elay and
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TH ANNUAL
RELAYS

Saturday, April 24

ES MOINES

ittee extend a cordial invitation to
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Athletes from the country's
wa high schools will com-

ed toward the 1943 Drake
letic events of America,
significance because
e men.

We'll Help You Make Your Reservations

The Headquarters Chairman of the Drake Relays Committee will be glad to make hotel reservations for coaches and teams. For further information write Director M. E. (Bill) Easton, Drake University, Des Moines, Ia.

ED WEIR

Referee of the 1943 Drake Relays will be Ed Weir, track coach of the University of Nebraska. In his seven years as mentor of the perennially strong Cornhusker crew, Coach Weir has brought many outstanding teams and individual stars to the Drake classic.

—Welcome—
ake Relays

★ ★ ★

Events

llege Section

Relay, One-Mile Re-
int Medley Relay,
o-Mile Relay.

igh School Section

Events—High Jump,
Pole Vault, Broad
Shot Put, Football
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0-Yd. Dash. *Relays*—
ile Relay, One-Mile
440-Yd. Relay and
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Dash, 120-Yd. High
Distance Medley
880-Yd. Relay, One-
day and Commando
e Race.

Athletics and the Curriculum

By Ellwood A. Geiges
Director of Athletics, Frankford High School, Philadelphia

ATHLETICS have never enjoyed a very respectable position in the academic household. They have been looked upon askance, considered not as a curricular activity, but tolerated as an extra-curricular barnacle with a corresponding minimum of attention in administrative planning.

There are two distinct groups that have influenced greatly the type of physical education program, used in American schools. Both are extremists, the "status quo" formalist—and the progressive "extravagandist."

The formalists have, for nearly half a century, shuddered every time competitive sports and games were mentioned. Their contribution has not been very substantial and their support unfalteringly negative. The construction of school buildings without adequate playing fields, the size, shape, and location of too many of our gymnasiums, give mute evidence of the lack of interest in a sports program. Many of the leaders of this group have ignored the vital need for a reorganized philosophy, as well as a reconstructed program. Frequently they have "played ball" with unsympathetic academic forces and have been unwilling to initiate or give active demonstrative support to any plans that would include athletics as a major activity in their curricular program. They wanted little to do with athletics, and regarded them as an evil to be avoided. So, competitive sports were relegated to an after-school—a back-lot or a side-street status—yes, extra curricular, without benefit of a budget providing for adequate personnel, equipment, or material.

Then there is the "all-out" athletic group who have little concern with the improvement of the physical quotient of the entire student body. They are interested chiefly in the development of championship teams and the training of a few selected students in special techniques. They have directed most of their energies to the development of boys and girls for high-pressure contests which have resulted in an undesirable over-emphasis of varsity competition, giving a minimum of attention to planning for the all-round physical development of every student in the school.

The conflict of these two groups resemble somewhat the controversy between the traditional and the progressive schools, and it is possible that there may be some connection. Is it not sensible, however, to assume that somewhere between these two extremes a sound program can be developed? Certainly, we will all agree that our program should not be made up entirely of athletics, but are we not equally as positive that competitive sports and games should occupy an important place in any physical fitness program?

If we agree that the aim of education is to prepare our young men and women for life, one of the best means by which this can be accomplished would be through the experiencing of situations in school, either similar or identical to those that are to be met in adult life. Competitive physical activity offers a perfect medium through which this objective may be achieved. There are those of us who believe that competition has no place in the education of youth. To this group I shall only say that, as long as man lives in a democratic form of society, enjoying the right of free enterprise, it is not only essential that he learn how to compete, but absolutely necessary that, through his experiences in school, he be prepared to play the game of life according to the rules.

The reports from our army and navy have awakened the people of this nation to the heroic deeds of those boys in our armed forces who enjoyed the benefits of athletic competition during their school life. These young men have written their names in flaming letters across the horizon of American history. The United States Office of Education has only recently issued a pamphlet, outlining a program of physical fitness with emphasis primarily upon the value of competitive games. Many of our school systems have announced their support of this program and have promptly increased the number of periods assigned to each boy and girl in the high school grades. The impact of such an expansion will undoubtedly affect the elementary and junior high schools. We have a big job ahead of us. We are urged to stress competitive sports and games in the new program. How will it be done? I do not believe this means that more time will be spent in the development of varsity teams—any more than it is an indication that the substantial portion of present program is to be discontinued. I do believe that much can be accomplished, if more time is given to the planning and teaching of athletic activities, and greater care is exercised by teachers in the selection of activities for both individuals and groups. A part of each daily period should be devoted to instruction in game skills, and their practical application through competition be effected in the gymnasium or on the athletic field, depending upon the activity, space, and equipment.

Let us not confuse this new assignment with the old intramural concept, where boys and girls were enlisted to join a team without any physical conditioning or training or instruction in the fundamental skills of that particular activity. It will be the responsibility of all of us to see that a well-integrated plan is developed which will guarantee the maximum benefits. Whether it be in hockey or football, in the gymnasium or on the track, we must embrace the entire field in our thinking and planning, not curricular on the one hand and extra-curricular on the other. This job cannot be done by the scheduling of games or the creation of leagues alone. It will mean a well-designed course of instruction during, and after, each school day.

The present emergency has been responsible for the changing concept in the physical education of youth. The tendency for physical activity and the desire for competition are innate in every normal boy and girl. It seems that we are about to utilize these two fundamentals in the new plan. Why not? There is no reason why running, throwing, jumping, climbing, and striking cannot be taught in the form of game skills. Let us not forget, however, that this entire program is based upon a series of vigorous conditioning exercises, in order to develop the larger muscle groups of the body and for the purpose of increasing stamina and endurance, as well as strength. Poise, whereaboutness, quick reaction and balance can then be achieved through competitive activities.

During, and immediately after, the last war those of us in the field of physical education had a great opportunity to gain a major place in the curriculum. Let us not fumble the ball this time. We have now begun a new drive for the development of American youth, not by the controlled formal method where a youngster can move only upon command, nor by the slovenly progressive (let him do what he pleases) method, but through a well-ordered program, designed to meet the needs and interests of the individual. War time always places an emphasis on essentials, but in war or peace, there always will be a demand for strong, durable-bodied young men and women who are physically sound and socially competent. A sane, well-balanced program of athletics can make a substantial contribution to this demand. No one will deny the importance of the derived values resulting from participation in competitive athletics. Certainly, ethical character is improved, a desire for a wholesome use of leisure time is created, and training for citizenship parallels the training for any athletic competition.

Here is a job that should have been done twenty-five years ago. Athletics for every-

Students can save their Keds

Numerous requests have come to us from athletic instructors for Keds conservation information. A full-color poster tells quickly and clearly how students can make their Keds last longer. You'll want to put it up on your bulletin board.

Students can Help win the War

A new Keds Bulletin features sports recommended in Victory Corps training. Important are check-up charts for keeping records of students' progress compared to standards of the armed forces.

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body, not for just a few students, a handful of selected experts, but for everybody.

I would suggest that, along with the new program now being introduced into our senior high schools, our elementary and junior high schools become active in sports and games, wherever the facilities permit, particularly in baseball, soccer and track and field, where little equipment is needed.

If all school children are given an opportunity to participate in some form of competitive physical activity, and are provided skilled instruction and adequate facilities, a great need in the education of our youth will be satisfied, and a great investment in the preservation of democracy will be made. Could more be asked of physical education than to help in this?

Rangers Are Made Not Born

By John H. Shaw

Chairman Boys Health Education Department
Franklin K. Lane High School, Brooklyn, New York

THROUGHOUT the country secondary schools are establishing "ranger" or "commando"-type programs in health and physical education departments to condition their young men for war. This type of program is receiving much publicity, and many schools are jumping on the band wagon to share the lime light. The cry "Put in a ranger program" is dominating all physical and health education activities. Unfortunately in their rush to get "aboard," many schools have not thought the problem through, nor have they given enough time to the proper activities and their progression.

It is absolutely necessary in planning the well-rounded "ranger" program to give considerable time to the organization, administration, and material to be included and not to rely on a hit-or-miss program that may only result in injury to the student. The ranger program is definitely not an obstacle race.

The purpose of this new course is to prepare the young man for the rigorous life which he must live while serving in the armed forces. This plan does not aim to prepare the student for any specialized field but to give him a foundation for any branch of the service.

Experiences of those who have participated in present-day combat focus our attention on the needs of the man about to enter the armed forces. He must be able to adjust himself physically; he must be able to take care of himself in the water; and he must have a practical knowledge and skill of first aid.

It has become apparent in our development of the ranger program that a long-term view is needed rather than a short intensive program. A long continuous progression from simple to strenuous activities should be followed. Instruction periods with demonstration and opportunities to practice will enable the student to progress gradually and will prevent unnecessary accidents and injuries.

Our governing philosophy in the ranger program has been to give the student a well-rounded schedule of physical activities, all phases of swimming, and a practical course in first aid. This we, at Franklin K. Lane High School, have accomplished in a three-fold manner.

I. Programming of Students—
   - A. Five periods of health and physical education per week.
   - B. Graded by years—1&2—3&4—5&6—7&8.
   - C. Hygiene (First Aid) given to odd 1-3-5-7—meet once a week.
   - D. Swimming given to even terms 2-4-6-8—meet once a week.

II. Medical and Physical Examination—Complete medical examination with a follow-up program to correct remedial defects.

III. Ranger drill—walking, running, jumping, climbing, crawling, balancing, vaulting, dodging, and tumbling under conditions simulated to those of actual combat.

In developing the latter part of our program we have become cognizant of the fact that we must avoid monotony of activities and eliminate all possibilities of injury or strain until the student has been properly conditioned and has developed sufficient stamina, strength, and muscular co-ordination. To accomplish this aim we planned a twenty-week term, organizing the work by weeks with continuity and progression.

We realize that it is most difficult to appreciate and understand these minute details and the gradual development, fundamental to the ranger program; therefore we are attempting to give a complete breakdown, outlining the various activities of the program by weeks, charts indicating the floor plans of each unit, and a bar graph explaining the intensity of certain phases of the work.

A Full Term Program

Unit I

First Week: Organisation of class by spots or platoons; selling of uniforms; sale of locks and locker adjustments; organization of hygiene and swimming classes; reading of departmental instructions and procedures.

Second Week: Medical examination (secured from the county medical society); military tactics (taken from the Infantry Drill Regulation, August 4, 1941); light calisthenics (conditioning exercises); marching.

Third, Fourth and Fifth Weeks: Military tactics—platoon formation; marching with music; beginning class drill for falling, rolling, and alertness exercises; hand-toughening exercises; pre-view and instruction of ranger drill for Unit II; beginning platoon competition in ranger activities.

Unit II

Sixth, Seventh, and Eighth Weeks: Heavy calisthenics; ranger drill; instruction in new activities; marching tactics.

Ninth Week: Examinations in items of Unit II.

Unit III

Tenth, Eleventh, Twelfth, and Thirteenth Weeks: Heavy calisthenics; instruction in new activities of ranger drill; ranger drill.

Fourteenth Week: Tests of Unit III.

Unit IV

Fifteenth Week: Mass competitive games, for platoons against platoons, pushball; soccer; war; dodge ball.

Sixteenth Week: Christmas Holiday.

Seventeenth Week: Public school athletic league; badge tests.

Eighteenth Week: Competitive sports program.

Nineteenth and Twentieth Weeks: Regents examinations and end term organization.

This schedule of the program by weeks may give the reader the impression that this is a very stiff, confining "must" program with little flexibility. In reality, any part of the program may be extended or shortened according to the ability of the students.

Swimming Program

The following intensive program in swimming is a complete term's work for all boys who are seventeen and eighteen years of age; a similar lighter program has been worked out for the younger students. This work is arranged in progression, so that in his final test, a student will

have received instructions and the opportunity to practice many of the emergencies that may occur on the water. All obstacles and experiences simulate those emergencies that may befall one in the armed forees. Particular emphasis is placed on good sound practical skills and not on any tricks, stunts, or fancy swimming. This program is arranged to coincide with Units I, II, III, and IV in the gymnasium.

I. Swimming Continuously: 20 yards underwater; 25 yards on right-side stroke; 25 yards using breast stroke of dog paddle; 25 yards on left-side stroke; 25 yards back stroke; 25 yards free style.

II. Swimming: A. In formation; B. Continuously for at least fifteen minutes with sailor uniforms (blouse and pants); C. 25 yards carrying a fifty-pound knapsack; D. 50 yards carrying a wand or gun (air rifle) out of water, using either left or right-side stroke; E. Treading water for at least five minutes; F. Propelling body through water using feet only for 25 yards, using a kicking board or a piece of wood; G. Jumping from spring board with knapsack and swimming 25 yards (holding nose and keeping knees up under chin when jumping); H. Handling of a sea-going dory.

III. Life Saving: A. Breaks; B. Holds; C. Carries; D. Water safety; E. Resuscitation; F. First aid.

Activities and Equipment Used in Ranger Drill

Horse (for preparation for parachute jump): Stand on horse; jump to mat and roll (forward jump roll, backward jump roll); weave and crawl in and out of uprights of the horse.

Horizontal: Vault with approach under low bamboo pole; back circles; skin the cat; chinning; wall (mat over horizontal bar used as wall) 7′ high (when the student has become proficient in these activities, he should be encouraged to use a knapsack).

Parallel Bars: Incline walk (place mats over bars (elephant), vaulting at various heights.

Low Parallel Bars: Swing dips; dips (cover with mat); crawl under.

Ropes: A—One rope climb; hands and feet, hands only, feet in L position; two-rope climb; three-rope climb; four-rope climb; ¼-½-¾ top; rope swing and change; swing with one rope, contact and change to second rope; continue the swing. B—Parachute jump; climb up one rope hand over hand; contact second rope; holding on to two ropes, drop (the drop should start low and progress to 10-12 feet). This should not be attempted until students have had training, jumping from horse and platform). C—Swing and alight on top of elephant. Swing and alight on top of elephant; change to second rope and swing off, landing on other side of ele-

phant. (Many variations may be worked up in this activity.)

Platform Jump: Parachute jump off platform with rolls; parachute jump with obstacles (mats rolled up); vault over railing on platform with rolls; vault over railing carrying knapsack (this activity should not be attempted until student has had instruction in tumbling and practice jumping from the horse and rope jump).

Balance Beam: (Use goal post uprights 4 x 4 and place them on desks; the walk is about thirty feet.) Upright walk; duck walk; walk with wand. (For eye and muscular co-ordination a tether ball which is directed at the walker is hung from the ceiling. The walker could duck or ward it off with a wand.) Walk past each other; contests.

Mats: Forward and backward rolls; side rolls; dive rolls; stunts; mat jump (mats 6 to 10 feet apart); jump from one mat to the other; stick wrestle; leg wrestle; arm wrestle.

Boxing: (Fundamentals taught in mass class formation.) Boxing during period with teacher in charge; use 16-ounce gloves, boys of equal weight box two two-minute rounds with a minute rest.

Sand Bag: (Filled with sawdust.) Use gloves and box two two-minute rounds (Instruction has previously been given in class).

Rope Jumping: Time and rounds.

Sand Bags: (Various weights 25-50-75 pounds.) Lifting on to platform; making a protective wall.

Barrel: Crawl through; jump in; jump out; roll.

Hurdles: Low and high hurdles; jump over low; crawl under high hurdle.

Wrestling: Fundamental holds and breaks which will lead up to a "Get-Tough" program to condition the young men of 17, 18, and 19 to the type of material they will get in the Armed Forces.

Walking: Encourage hikes; walk-to-school campaign.

Running: Warm-up, beginning of period; 40-yard dash gym sprints; ¼- and ½-mile runs outdoors.

Jumping: Broad jump; mat to mat; step and leap; parachute drop; platform; horse.

Climbing: Ropes; wall; fence.

Crawling: (Under mats covering low parallel bars.) In and out of uprights of horse; on mats up to sand-bag wall and diving over to the other side; through the barrel; underneath high hurdle.

Vaulting: Elephant, hurdles, low horizontals; fence.

Falling: Run-and-fall drill; proper landing from given heights; plus front, back, and side rolls.

Dodging: Group games; competitive sports.

Tumbling: Forward rolls; backward rolls; side rolls; dive; headstand; cartwheel.

Balance: Balance beam; horizontal bar.

(To be continued in May)

A New Plan—For Scoring Basketball

By E. R. Abramoski
Erie, Pennsylvania, High School

THE recent discussions and suggestions of the National Association of Basketball Coaches would indicate that much thought is being given by basketball coaches to the prominence of tall basketball players in present-day basketball. The author of the accompanying article, A New Plan For Basketball Scoring, suggests that a new scoring plan be tried to remedy the disadvantages now present.

MORE than a half a century has elapsed since James Naismith hung two peach baskets to either side of a gymnasium and gave his class of eighteen prospective Y.M.C.A. secretaries, and the world at large, the only major game of direct American origin. Because of its challenge to the skill of the player, and because of its action, color, speed, and the fact that it can readily be explained and understood, the game has grown until it is, without doubt, America's number one indoor sport. That the game has spread to all ports of the civilized world may be verified by the fact that in 1936 twenty-one nations entered basketball teams in Olympic competition.

That the game has spectator appeal is attested to by the fact that in the United States for the past several years the game has attracted more cash customers than either football or baseball. In other words, now that it is not unusual for twenty-thousand people to gather in New York to see basketball games, the game has become "big business," and people in general are always very much concerned about business. This time their concern is justified.

Never before, since Dr. Naismith gave the world its new game, governed by thirteen simple rules, has there been more severe criticism of the game as it is now played, from both spectators and coaches. We can blame this on two simple changes in the rules of the game: (1) elimination of the center jump, (2) the establishment of the ten-second rule.

The elimination of the center jump was intended to restrain the giants and make the game more equal. But—the rule has boomeranged and instead of having one giant on a team, the game is in the hands of the "behemoths." Where once a team had only one "bean pole," it now has five, and the place for the small clever performer no longer exists. Instead, as the late George Keogan of Notre Dame once said, "The game is in the hands of five mediocre goons"—or words to that effect.

The rule, however, that causes most coaches to chew their nails is the rule that forces the team to give up the ball after making a basket or free throw. This means that a team that is trailing by a margin of three points with two minutes left to play is practically conceded defeat. If the team should score a goal, the ball is given to their opponents who "freeze" it until the game is ended.

It is this part of the basketball rules that causes the spectators to put on their overcoats and head for the exits, when the playing time shows two minutes left to play.

Another objection that many coaches voice is the objection to the ten-second rule. The rule, passed with the intention of keeping teams from "stalling" in the back court, has given the zone defense an advantage in the game. A team using a zone defense "digs" itself in the area surrounding the basket and challenges the offensive team to penetrate its bulwarks. This leaves the offensive team with but two alternatives: Either they must shoot over the heads of the zone defense, or beat them to the area around the basket. This has led to the type of basketball that has been called such names as "perpetual motion," "fire engine," "race track," "pell-mell," etc. It is this type of attack that is receiving the most severe criticism today from both coaches and spectators.

Fearing that Johnny Q may tire of "race-horse tactics," and alarmed by the statements of physicians that the game is too fast and will take its toll in the breakdown of the health of the players, the coaches are experimenting with innovations that will bring the game back to the stage where it can again be called basketball.

During the past few seasons, an experiment was carried on at Erie Technical High School in which twenty-five intramural teams tried a new scoring plan, whereby field goals were credited with two points or three points depending on the place from where the ball is thrown.

The scoring zones, as set up under the plan require that an arc, the radius of which is twenty feet from the center of the basket, be inscribed on the floor of the court. The area contained within the arc would then become a two-point area. Any shot tossed from this point and scoring a goal would carry a value of two points. Field goals scored from any position outside the arc would carry a value of three points.

Such a scoring plan would, from observation of the games played in the intramural leagues, have the following effects upon the game:

1. The "perpetual-motion" basketball which is based upon the fast break would necessarily give way in the presence of a couple of set-shot artists who could stand outside the twenty-foot arc and sink "triple deckers."

2. It would open up and spread out the zone defenses, making it again possible for clever ball-handlers and agile players who possess the ability for quick maneuvers, clever fakes and unexpected reverses, to gain again their place on the teams.

3. It would de-emphasize the present advantage of height, as was intended by the passage of the rule eliminating the center jump.

4. It would give the team trailing by a few points in the closing minutes of the game an opportunity to pull up or pass the team that is leading, by heaving in a "triple decker" or two, and keep the spectators glued to their seats until the final whistle.

5. It would make "freezing" the ball in the closing minutes of the game less attractive, as a loss of the ball and a long heave by the opponents might mean defeat.

6. It would create a trend away from "rough" games since the defense would have to spread, removing many opportunities for body contact and again encouraging the short, snappy passing which has rapidly been fading.

7. It would once again make the entire court a playing area, as the zone defense would have to come out after the ball or give their opponents an opportunity to set and sink "bonus" baskets.

Although it is the belief of the writer that there is little chance that the innovation, herein presented, will be adopted immediately, nevertheless, it will cause coaches to think about the matter, and perhaps in combining this experiment with others, have the effect of again bringing the game to the high scientific standard that it once was. That it will bring the game away from the apparently mad scramble that it is today is quite evident, and once again place the outcome on studied formations, planned plays, and deliberated movements, that present an organized appearance and appeal to the aesthetic sense of the paying customer, the spectator.

The Pole Vault

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ONE of the most interesting events for spectators on the track and field program is the pole vault. The thrill of watching an athlete propel himself into the upper reaches by means of a slim bamboo pole is a unique one and one well worth seeing.

While the vaulter of today is reaching dizzy heights this was not always true. Consider that the record for the pole vault in 1877 was nine feet, seven inches held by G. McNichol. In just ten more years the ceiling had been raised to eleven feet, five inches by H. Baxter. In 1940 Cornelius Warmerdam, of Fresno State sailed into the air fifteen feet, one and one-eighth inches, for the best mark made by an American college man, and now a number of vaulters have set their sights at sixteen feet.

These gains in height have not just happened but have come about as the result of hard work on the part of both the athlete and the coach. Much study in vaulting techniques has been one of the primary reasons for the great gains made.

Techniques Improved

The vaulter of fifty years ago would be amazed at the heights reached by present day performers, and would notice significant differences in the implements used, including the pole and vaulting box, and in the vaulters' techniques. Whereas the first poles were merely wooden poles with a sharp point, or a spike driven into the end of the pole, today's vaulters all use the standard bamboo or the metal poles.

While at first the vaulter thrust his pole into a shallow hole in the ground, or perhaps just stuck his sharply pointed pole into the hard ground, today the vaulter has the benefit of well constructed wooden or metal vaulting boxes, that have aided much in attaining the heights.

Longer Training Periods

While the old standard technique was to vault with the hands two or three feet apart during the pull-up and release, today's vaulters take advantage of the gains in mechanics from a vault executed with the hands not more than two or three inches apart during this phase of the vault.

Of course other factors have entered into the improvement of vaulters and the constantly increasing heights such as longer training periods, greatly improved vaulting facilities including indoor tracks, vastly improved coaching in the high schools, and, of course, the incentive offered by a large number of high-class meets throughout the country.

Pole Selection

Most of the better vaulters today are using the bamboo pole of either fourteen or sixteen feet, although the sixteen-foot pole is standard for most college vaulters. Many high school vaulters prefer the fourteen-foot pole, and there are some top-notch college performers who also like this length. Metal poles are used in many places, and some vaulters like them better than the bamboo, although the metal pole is greatly in the minority, and does not appear to have the "snap" of the bamboo stick. The best pole is one of uniform thickness, and should be selected with regard to the weight of the vaulter who is to use it. Obviously, a vaulter who weighs one hundred seventy-five pounds will want a heavier pole than a man who weighs only one hundred forty-five pounds. Many vaulters make the mistake of selecting a pole that is too light in proportion to their weight. Most sporting goods dealers selling poles will be glad to select the proper pole if the coach will give them the weight of his vaulter.

In selecting a pole the vaulter should make sure that it is not too green as it will not give the proper service, and is likely to bend too easily. A pole that is too brown in color is usually an old pole, and will not give the best service.

The Hand-Hold and the Carry

Most of the better vaulters today carry the pole during the run with the hands from two to three feet apart on the pole. The palm of the right hand (for right-handed vaulters) is up, while the left hand grasps the pole with the palm down. The position of the left arm during the run may be one in which it is carried close to the body, or it may be held out away from the body farther in front, so that the arm is almost straight.

Most vaulters carry the pole so that the end which is thrust into the vaulting box is about at the height of the head although some prefer to carry it higher than this. The hand hold during the vault does not vary greatly with different heights. A hold of twelve feet on the pole should enable the vaulter to clear the bar at more than thirteen feet.

The Run

The length of the run may vary from seventy to a hundred feet, with the average probably approximating eighty-five feet for the total run. Many plans are used to enable the vaulter to place his take-off foot at the proper place. One plan that may be found successful is to measure a distance of fifty-five feet from the vaulting box and draw a line. Have the vaulter practice running from this point with the pole in his hands. He should traverse the distance in eight strides, his eighth stride finding him hitting the take-off mark with his take-off foot.

A distance of thirty-five feet may be measured from the fifty-five-foot mark away from the pit, and the vaulter may then start from this point, usually taking six strides before he hits the fifty-five-foot mark. Much practice and great patience are required before the vaulter has perfected his run. Local conditions will alter his check marks as will weather and track conditions. With a strong wind at his back and a fast runway, the vaulter will have to increase the length of his run while the opposite will hold true with a wind against the vaulter and a heavy or slow runway.

Different stride plans, such as the 4-6-6, 2-6-8, or 2-6-10 may be used, each figure indicating the number of strides the vaulter will take between check marks.

Pole-Plant, Take-Off, and Hand-Shift

The pole may be thrust into the vaulting box from either of two positions, a fairly high carry or one that starts from about the hip. The lower thrust has the advantage of getting the pole into the box just as the vaulter is completing his last stride while at the same time the lower hand is shifted to a position from two to three inches below the right, or top hand. Care should be taken so that the pole is not thrust into the box too soon, as this will result in loss of momentum in the swing-up. The pole should have some momentum as it is thrust into the box.

The Take-Off

There has been and is now a certain amount of controversy regarding the exact position of the take-off foot as it leaves the ground. Most coaches agree that it is better for this foot to be directly in line with the pole as it is planted. If the foot strikes too far to the right there

is a tendency to snap the vaulter back into the pole on the swing-up, thus ruining his vault. It would be better to take off slightly to the left rather than to the right.

A rule which will work rather well in most cases is to have the vaulter take off with the take-off foot directly under the hands when they are stretched, or perhaps a trifle farther back. If the vaulter grasps the pole at the height he will use in his vault, then draws a line from the top hand perpendicular to the ground it will approximate his take-off in most cases. Some coaches prefer to have the take-off moved back slightly from this point, feeling that the "giant swing" is aided by allowing a longer arc.

Arms Slightly Bent

Just as the pole is thrust into the box the arms should be slightly bent to absorb the shock which comes when the vaulter is being pulled by the momentum of the pole. This momentum is greater than the momentum generated by the vaulter at the moment of his take-off. It is well to have the vaulter pull along the line of his pole all the way, however, and the pole must be held in close to the body. With the pole held too far away the vaulter loses the advantage of leverage.

Let Stomach Lead

As the vaulter leaves the ground the right or leading leg is swung up along the line of the pole, while the left leg follows. As the right leg is swung out and up it is well to have the vaulter thrust his stomach out and to allow the legs to trail slightly—this will result in a much freer and easier swing up. It must be remembered that the vaulter has had to change his direction from a forward to a forward and upward motion at the moment of the take-off.

Keep Arms Straight

As the vaulter begins his swing the arms should be kept straight, and the pole should be allowed to pull him up. Failure to do this will result in the pole failing to reach an erect position and the swing will not be fully completed. Most beginners make the mistake of pulling much too soon.

The Pull-Up

It must be remembered that the pull-up is around the shoulder, not around the hands. It is at this stage of the vault that the value of gymnastic training is evident. Since the vault is partly an acrobatic event, the coach is fortunate if his vaulters have the ability to do many of the "stunts" of the gymnast. Work with the gym team, or under the gym coach will prove invaluable to the athlete hoping to improve his marks.

When to Start the Pull

The pull should not start too soon, as it was pointed out, this will kill the "swing up." A general rule—have the vaulter start his pull when the legs are even with the hips. The pull should not be started until the momentum generated by the swing has given out. As the take-off foot follows the leading leg the knees should be tucked in while the feet and legs should be shot upward. During this part of the vault the vaulter should push hard on the pole attempting to get into a hand stand position, then pushing vigorously down on his pole.

During the swing the right leg is brought slightly across to the left but care must be taken not to bring the right leg too far across as this will take the vaulter too far away from his pole so that he will not be able to exert pressure and push downward. The body turn is started when the pull-up is almost completed.

When the vaulter is directly over the bar and just before he releases the legs should be kicked vigorously, so that added height may be acquired. This leg kick will help to raise the hips enough so that many vaults will be "saved."

The "Shoot" and Jack-Knife Forms

The two most common forms used during the pull-up are the "shoot" form and the jack-knife. It is felt that the proper application of the form in the jack-knife will result in higher heights, other things being equal. In the "shoot" form the body mass must in reality be lifted higher than in the jack-knife, where the body is arched at the end of the vault while the stomach is drawn in and the hips are raised.

The Release

After the vaulter has his body directly over the bar and has reached the top of the movement whether using the "shoot" or jack-knife style, he pushes down hard with his hands and arms. The release should come just about the time the feet reach the level of the vaulter's hands. Care must be taken not to delay the release too long. This will result in the arms or chest displacing the bar.

Two Methods of Release

There are two generally accepted methods of releasing the pole. One is the double arm or fly-away release. The other is the newer method in which the lower hand is released before the right or top hand. This method is sometimes called the 1-2 release. The latter is better, as force can be applied longer with this method. Even after the left or lower hand has stopped its push on the pole, the right hand is still making contact and is applying pressure downward. In the 1-2 release the left arm should be thrown sharply up and to the left as the release is made. This will result in the vaulter landing with his back to the direction of his run, rather than facing the runway, as in the fly-away method of release. Whichever method is used it is important that the vaulter work in close to and along the line of the pole throughout his release. The coach will do well to ask his vaulter to keep his eyes on the bar during this phase of the vault, as often a vault will be "saved" if the vaulter knows exactly how close he is to the bar during the release.

In landing the vaulter should attempt to land in a relaxed position.

General

Other things being equal the tall man will probably make the best vaulter. Most of the champions during the last ten years have been men six feet or more in height. There have been some fine vaulters who have been well under six feet in height, but they have been in the minority. Strength in the shoulder girdle is a great aid, while the pectoral muscles should be developed to a degree where the vaulter can really accomplish something in his pull and push away at the end of his vault.

Exercises That Will Aid

Exercises such as rope climbing, push and pull-ups, work on the parallel bars, hand stands with a quick throw back onto the feet, short sprints, and some hurdling will all help the vaulter. Pole vaulting in championship events is not an easy task, and the vaulter does lots of running in the course of an afternoon or evening's vaulting. Should the coach possess a motion picture camera he will find it invaluable in pointing out errors in form—it is best to take the pictures in slow motion, and from the side of the pit. Lacking a motion picture camera, much constructive work can be done with a series of still pictures, taken with an ordinary camera. These will aid in stimulating interest in the vaulter himself, and will do much toward getting him to analyze his own form.

Whenever two or three vaulters are working at the same time, the coach should attempt to have the men not vaulting pick out faults in form. One may watch the take-off, another the time at which the vaulter is getting his pull, another may watch the position of the feet at the moment the release is made, etc. The vaulter should be encouraged to think of his event as a challenge to his best efforts.

Developing Quarter Milers

(Continued from page 18)

quite often it gives him five free yards over the field, for it has been my experience that most quarter milers approach the starting holes in a dangerously humble mood. This quality of aggressiveness, suggested and formulated by an extremely fast start, is the indispensable weapon of a fine quarter miler.

As for jockeying in the field, the problems involved are so infinite and experience plays such a big part, that I will only touch on one or two in passing. For one thing, the boy should be instructed to avoid "pockets" and he should be educated to the situations in which he may expect to encounter them. Secondly, he should begin his "kick," that is, his finishing spurt, at a time most unexpected by his rival. The typical spot to begin the kick is at the beginning of the last straightaway. There is no invaluable element of surprise in starting it there, but if one starts it earlier, say at the beginning or the middle of the last curve, he may catch his opponent off guard, and, through the paralyzing effect of such surprise, gain another free five yards.

The subject of developing good quarter milers surely calls for more space than has been occupied by this article. It is really not as simple as this paper suggests. My only aim here is to outline the job. The details are furnished by the experience gained in running and coaching this great event.

The Quarter Has Personality

I have observed that races have personalities, just like the people who watch and run them. Distance races, from the mile on up, are sober, precise, sort of "oldish" affairs. They intrigue people who are scientifically inclined, people who like to finger stop watches, and argue pace problems.

If any race is the antithesis of this type, it is the quarter mile. It is rough, fast, extremely competitive.

Human Engineering Through Industrial Recreation

(Continued from page 14)

dividual employees' recreation association is formed, the program should be financially self-sustaining. (1) Each employee should be assessed dues on bi-weekly or monthly basis. (2) Concessions should be installed, the profits to revert to the employees' recreation association. The extent and kind of these concessions, if properly selected, provide a commendable

and extensive source of revenue. (3) Activities such as bowling and dances should be incorporated in the program, in order to make additional revenue for defraying expenses of the program. Revenue from bowling demands an employee recreation building in which bowling alleys are installed. Dancing demands a recreation building in which a hall, auditorium or gymnasium is available. When commercial facilities are used for these activities, the revenue accrues to the proprietor and not to the recreation association. (4) In securing the physical plant for the recreation program, bonds may be underwritten by top-management or employees, these bonds to be retired over a period of years from the revenue earned from the program itself.

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Physical Fitness at Farragut, Idaho

(Continued from page 9)

d. Artificial respiration.

C. Terminate period with short snappy relays.

Period V.

A. Swim test (second for everyone).
   a. 75-yard course, using jumping start from the 10-foot board.

B. Practice jumps from 10-foot board with and without life jackets.

C. Instruction of non-swimmers.

D. Terminate period with short snappy relays.

Period VI.

A. Final qualifying swimming test.
   a. 75-yard swim test using a jumping start from 10-foot board.

B. General review.
   a. Floating.
   b. Treading.
   c. Sculling.
   d. Makeshift life preservers.
   e. Artificial respiration.

In developing the physical all-roundness that is required of the Farragut bluejacket, scheduled periods varying in length from one to three hours are equally distributed over the twelve weeks of training for physical fitness activities.

These periods are so distributed as to give each company at least an average of one hour of organized physical fitness or swimming per day in addition to athletics during recreation periods. These periods are planned by the physical fitness section, so that each company going through training will receive similar physical activity.

A number of sports besides calisthenics and physical drill have been selected for the physical fitness program. The sports selected that seem to contribute the most toward meeting the aims and objectives of the program are boxing, hand-to-hand combat, basketball, military track (physical hardening obstacle course), soccer and wrestling.

Boxing, one of the oldest sports, provides in its elements of individual combat, a close parallel to the battle conditions that a sailor must face. Being able to take as well as give all bluejackets must learn.

Objectives of the boxing program are:

a. To give instruction and practice in boxing fundamentals.

b. To give the bluejacket the self-assurance necessary to successful self-defense.

c. To develop an aggressive combative spirit, self-reliance, stamina and courage.

Hand-to-hand combat includes the most effective maneuvers of wrestling, boxing and soccer, which may be used in self-defense against an opponent who may, or may not, be armed. The successful use of this method of combat depends upon physical courage, superior skill and superior physical condition. Emphasis is placed upon a vigorous and violent counter at-

tack, rather than upon the refinement of boxing or wrestling.

Objectives of the hand-to-hand combative activities are:

a. To teach the skills of ordinary combat against an unarmed opponent.
b. To teach the most effective methods of self-defense against an assailant armed with a gun, knife, blackjack or riot stick.
c. To teach the best methods of overcoming an opponent who has gained a temporary advantage.
d. To liquidate an opponent.

Basetball's place in the program is important because of its premium on individual competitive skill, aggressiveness, physical stamina and on the individual's ability to fit himself into team play. The game is particularly valuable in the development of optical, muscular and mental co-ordination.

Objectives of basketball in the program:

a. To develop a spirit of team play.
b. To improve co-ordination of the eye, mind and body.
c. To develop the ability to make instantaneous and accurate decisions.
d. To develop agility and endurance.

Track or obstacle-course running is of great value in the program as a method of developing endurance and stamina.

Objectives of track or obstacle-course running in the program are:

a. To improve the all-round physical condition of the bluejacket.
b. To develop speed, agility, endurance, co-ordination, strength and timing.
c. To instruct bluejackets in skills that have carry-over value into military tactics.

Soccer has a unique place in the program. It is the one sport in which a bluejacket learns to control his own weight and the ball at the same time. This feature of the program stresses the development of agility, co-ordination and balance.

Objectives of soccer in the program are:

a. To develop team play, agility, speed, ruggedness, endurance, quick thinking, anticipation, timing and a will to win.
b. To encourage body contact in order to develop ruggedness and endurance.
c. To develop the use of the feet.
d. To improve the general all-round physical condition of the bluejacket.

Wrestling's fundamental movements are basic movements in actual combat between two men. American catch-as-catch can wrestling or wrestling as taught in our schools is a combination of the outstanding points of three wrestling sciences: first, Japanese-Judo which teaches many skillful take downs and falls; second, Greco-Roman, which presents the arm and shoulder science of locks and trips from a locked

position; third, American rough-and-tumble wrestling, which features speed and movement in ground wrestling, and especially the science of leg scissors that can be applied to body, legs, head or arms. Our amateur rules do not permit torture or bone-breaking holds or locks. However, most of the holds taught in amateur wrestling can be extended and driven through until an opponent is crippled or actually killed.

Objectives of wrestling in the program are:

a. To teach the science of holds.
b. To teach how to execute the holds.
c. To teach that scientific execution is more effective than brute force.
d. To develop the bluejacket physically and provide excellent conditioning activities.
e. To develop toughness, aggressiveness and self-confidence.

Routine morning exercises follow reveille during the spring, summer and fall months. In addition to the morning exercises, each company is required to cover the full physical fitness obstacle course assigned to their area once each day. During the mid-winter months the morning exercises are eliminated, but the program still requires the running of the obstacle course.

The training routine for morning exercises is as follows:

a. Line up in columns of fours, taking arms length distance.
b. Forward march—remain in cadence throughout routine—20 paces.
c. Run (jog) slowly in columns of fours, 440 yards.
d. Walk, 50 paces.
e. Run (high knee action), 20 paces.
f. Walk (legs wide spread), 20 paces.
g. Run (legs straight and thrown from hip), 10 paces.
h. Walk (legs wide spread in half squat), 10 paces.
i. Walk (legs wide spread in full squat), 10 paces.
j. Run (jog) slowly, 440 yards.
k. Walk (goose step), 20 paces.
l. Walk (high knee action), 20 paces.
m. Standing broad jump—one jump then walk ten paces.
n. Standing broad jump—two jumps consecutively then walk ten paces.
o. Standing broad jump—three jumps consecutively.
p. Walk 50 paces fast.
q. Walking—bend and touch the ground at the instep. Left hand to right foot; right hand to left foot; repeat ten times each hand for 60 paces (every third step).
r. Finish with—jog—run—sprint (40 yards).

The recruit training recreation sports program—evenings and Sunday afternoons—includes softball, basketball, soccer, rowing, touch football, volleyball, swimming and boxing.

Each regiment at regular intervals has an elimination tourney in the various activities listed to decide the regimental championships. The regimental champions then meet to decide the all-station championships. Records made in the various events are kept by the regiments and physical fitness section which sponsors all tourneys. Such records serve as an incentive for greater achievement, particularly in the swimming and physical fitness tests.

The recruit training curriculum also includes hikes, military drills, and many other activities that contribute to the physical development of the bluejacket.

Farragut, located in a snow country, also has such winter activities as skiing, bob-sledding, ice-skating, and cross-country work on snow shoes. These winter activities, however, are limited, due to lack of equipment. The mountainous terrain about the station is frequently used for the strenuous activity of mountain climbing.

Many Farragut bluejackets have already been graduated and have taken their places in the fleet. Some of their accomplishments are already recorded and many more will be, as the war progresses. Whatever the lot of the Farragut bluejacket, as he battles the Axis foe, he will at least have had every opportunity to enter the fray—physically fit, mentally alert and with a surplus of stamina and endurance.